Paper TRADE JOURNAL

OCTOBER 27, 1949 PUBLISHED WEEKLY

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Some of these Downingtown PROFLOW and CONFLOW Vats are for complete machines, making sheets calipering from 9 to 50 points, and the caliper being held to plus or minus $\frac{1}{2}$ point and the weight held to within 2 to 4%. Others are for new liner vats on old machines, to improve coverage with minimum liner usage. Altogether, the vats made, or were added to, a total of 23 machines, one being the "World's Largest Combination Felt and Liner Board Machine" with 10 vats, other big machines being three with 8 vats and three with 7 vats. These 93 vats were built in every possible type of construction.

With our wealth of MODERN cylinder machine designing and building experience at Downingtown, a talk with one of our engineers may convince you that *"you cannot afford to do without the equipment you think you cannot afford to buy right now."* Your problems of quality and production can be discussed and the solution recommended. Call on us.

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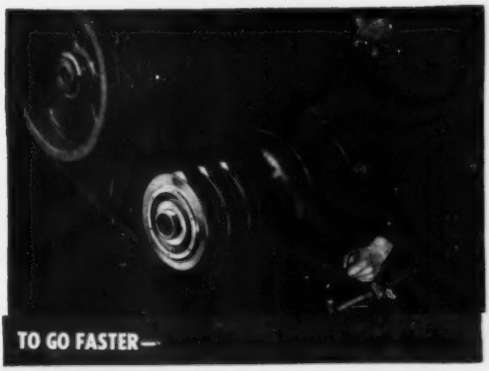

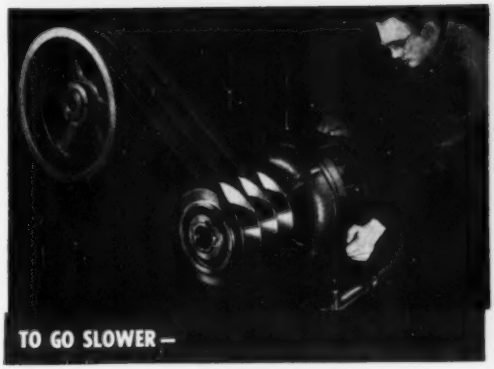

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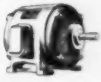

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MEMBER

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Two Outstanding New Installations on the Pacific Coast

Two new Puseyjones Machines are now in operation on the Pacific Coast—at the East Antioch mill of Fibreboard Products, Inc.; at the Tacoma mill of St. Regis Paper Company. New in design . . . new in outstanding features . . . new in high speed, large tonnage production. Whatever your papermaking problem may be, we will gladly show you what's new in Puseyjones Machines and what's on the boards for the future.

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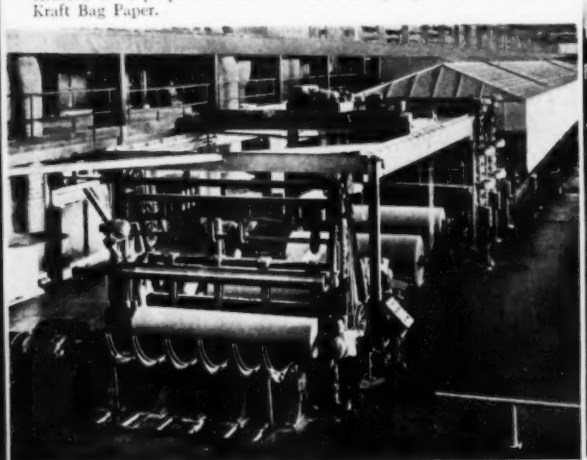
FIBREBOARD

Two views of new Puseyjones Machine at Fibreboard Products, Inc East Antioch, California. Wire width is 156 inches. Capacity is 12 tons of corrugated liner per day.

Two views of 180" Puseyjones Fourdrinier Machine at Tacoma, Washington mill of St. Regis Paper Company. Designed and constructed for top speed of 2100 F.P.M. making high-test multi-wall Kraft Bag Paper.



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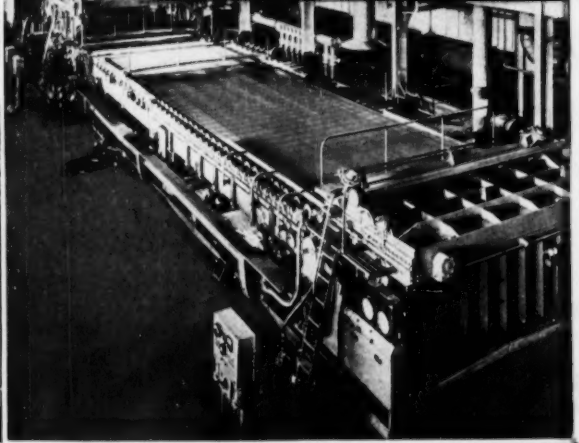

Paper TRADE JOURNAL

TRENDS

Office of the PAPER TRADE JOURNAL,
Wednesday, October 26, 1949.

Sanitary Tissue Demand Rallies

A revival in demand for household tissues is noted by industry leaders, with the increase likely to continue throughout the balance of 1949 at least.

In a brief analysis of the situation for the three major sanitary tissue products provided by the Tissue Association, the basically healthy condition of the toilet tissue demand is pointed up. (See Table I.) It is held as a matter of record that per capita consumption shows no falling off except in periods of acute depression. In view of the general economic situation this year, no reversal of the long-time trend is expected, and a resumption of normal forward buying is anticipated for the balance of the year.

TABLE I

U. S. Toilet Tissue Demand

	1948	1949
Population, July 1	146,571,000	149,215,000
Estimated Production in tons	442,926	447,645
Per Capita Consumption in lbs.	6.04	6.0

Paper Towels. At no time since the war has the production of paper towels caught up with potential demand. While demand is likely to be affected to some degree by a falling off in the rate of industrial production, requirements for Armed Services and for seasonal school business, plus the general economic situation, indicate a strong demand for paper towels for the balance of the year. Aggressive selling toward increasing use in schools and all other areas of consumption would preclude any possibility of slackening of demand in the near future.

Facial Tissue. By reason of its increased capacity, it seemed that this branch of the tissue industry might have created a competitive situation which would react seriously on other grades of tissue, as well as on boxed facial. Strong favorable factors generally overlooked in such reasonings were (1) constantly increasing demand for facial type toilet paper (estimated at 30,166 tons in 1946, jumped to 67,843 tons in 1948, and to 56,328 tons for the first seven months of 1949—a 50 percent increase in 1949 production over that of 1948); (2) increasing popularity of new napkins made from facial tissue stock; (3) various minor new uses or expansion of old uses of facial tissue stock. Excess inventory positions on boxed facial were corrected by reduced purchases from the manufacturers from January to May. June and July shipments showed a moderate but healthy gain over 1948 figures, indicating a return of good business for the balance of the year and into 1950.

Pressure on Newsprint Price

Pressure from U. S. publishers for a 5 percent cut in newsprint price is not likely to bring results until demand falls off, in the opinion of Ottawa Trade Department officials who argue that high production costs make any reduction in newsprint prices unlikely.

One large U.S. newspaper estimates that the increased cost of freight and supplies bought by Canadian mills in the U.S. amounts to $2.50 per ton, leaving a net "bonus" of $7.50 to Canadian producers as a result of devaluation of the Canadian dollar, the ANPA Newsprint Bulletin reports. Local U.S. trade sources compute the added costs of sulfur, coal, freight, etc., nearer to $8, and set the margin of gain from devaluation as close to 2 percent.

Price Steadiness Through 1950

TORONTO—Canadian government experts predict that prices of newsprint could be held steady through 1950.

The unknown factor entering into the price picture, government authorities say, is the extent to which exchange difficulties might affect the newsprint market.

In the first seven months this year, Canada exported $236,713,000 worth of newsprint. The over-all position of the newsprint industry around the world for the coming year looked strong, with next year's total demand appearing to be greater than the year's potential output.

Government authorities say the estimated maximum demand for newsprint in 1950 would amount to 10,436,000 tons, while estimated total supply was from 9,436,000 tons to 10,280,000 tons. The experts say this excess of demand over supply would guarantee stability of the Canadian newsprint industry, but only if free movement of tonnage from any source to any market existed. If, the officials declare, Canadian newsprint could not find markets in Great Britain and other sterling area countries next year because of currency problems, then a surplus would accumulate on the U.S. market, and this might lead to a minor weakening of prices.

Britain Wants Canadian Newsprint

Because of the speculation about the possible effects of devaluation on the supply of newsprint, the Newsprint Supply Company of Britain prepared a statement, sections of which are quoted:

"In the case of Canada, deliveries under the Company's current contracts to the end of 1949 will not be affected as provision for payment was made before devaluation of the £ sterling. The Government has not yet told Newsprint Supply what imports will be permitted under its contracts for 1950. This question will have to be reviewed in the light of the increased sterling cost of Canadian newsprint and the general revision of dollar import programs. . . . Despite the increased cost, the Company will adhere to its policy of maintaining the maximum possible import from Canada, both to honour its contracts with friends who have helped this country so generously, and to keep open a source of supply on which the security of the British press so largely depends.

"As all the Scandinavian countries have devalued their currencies to the same extent as the pound, no question of exchange adjustments arises. However, one effect of devaluation will certainly be an increased demand from other countries for Scandinavian newsprint and pulp. The supply position which had become easier during the past few months may therefore tend to become more difficult again. . . . In the interests of future security, it is important that the Canadian market is kept open to the UK. The Company is now in full negotiation to see what can be done to minimise the effect of devaluation on future supplies."

Kraft Wrapping Price Unchanged

There appears to be no substance to the daily press report that kraft wrapping price had been upped to $6.75 from its $6.50 quotation for *standard, rolls,* carlots. Kraft mills are running 90.4 pmc, mostly on 7-days, and are allocating *wrapping* production on the September backlog. Trade executives expect no early price shift.

Production Indexes

Ratio of production of unbleached kraft paper to potential mill capacity for that product was 90.4 percent for the week ended October 15, compared with 83.4 percent for the preceding week, and with 99.1 for the corresponding week of last year.

Comparative ratios of U. S. paper and paperboard production to mill capacity, as reported by AP&PA, are:

	Oct. 15 1949	Oct. 8 1949	Oct. 16 1948	Oct. 18 1947	Oct. 19 1946
Paper	99.6	96.6	101.8	108.3	105.1
Paperboard ..	94.0	92.0	97.0	101.0	98.0

‡ Revised.

Paperboard Production (Tons)

	Oct. 15 1949	Oct. 8 1949	Oct. 16 1948
Production	208,450	201,544	192,539
New Orders	191,375	282,832	185,610
Unfilled Orders ...	422,552	440,721	384,134

Percent of Activity, Current, 94%; Year, 81%.

General Business Indexes

Index of general business activity for the week ended October 15 inclined to 121.8 from 119.7 in the preceding week, compared with 148.3 in the corresponding week of 1948. Index of paperboard production rose to 189.5 from 182.7 in the preceding week, compared with 176.5 in the corresponding week of 1948.

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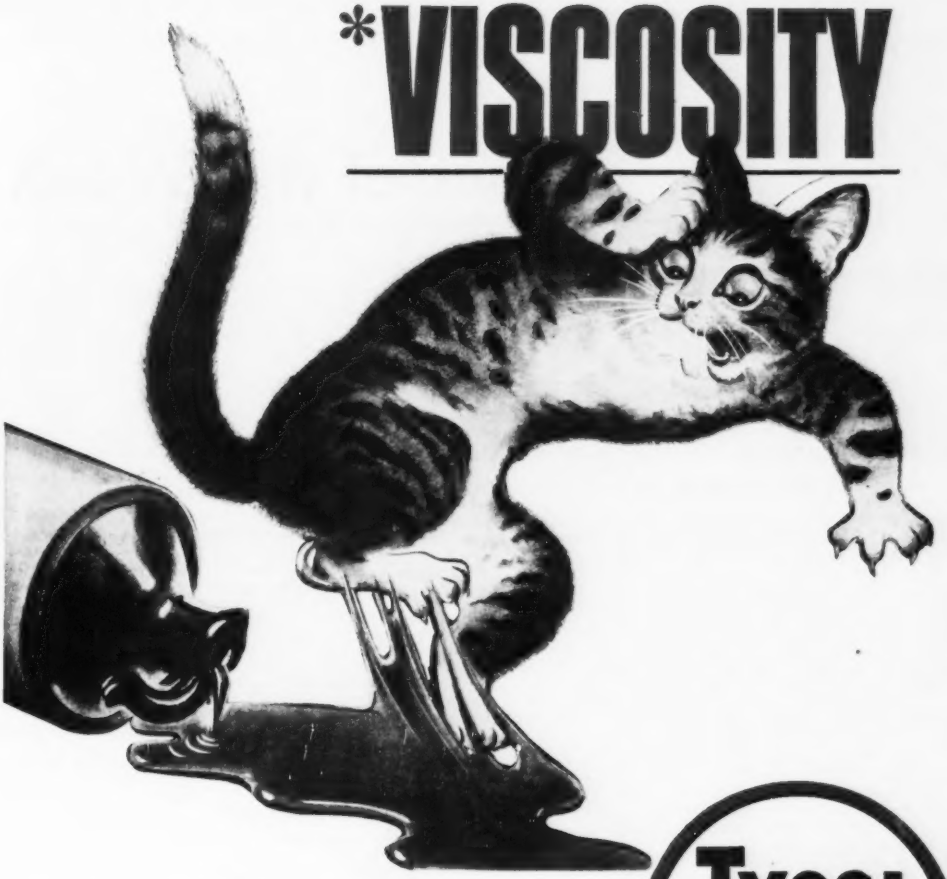

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Paper TRADE JOURNAL

News of the Week

MILLS

International Stock Split Plan

NEW YORK — A proposal to split International Paper Co., common stock two-for-one will be submitted to stockholders at a special meeting on December 16, John H. Hinman, president, reported to *Paper Trade Journal* on October 25. Mr. Hinman said:

"At their meeting this morning our board of directors approved a proposal under which each share of common stock, now of $15 par value, would be divided into two shares of $7.50 par value each.

"The proposal will be submitted for consideration at a special stockholders' meeting to be held December 16, 1949. All common stockholders of record at the close of business November 7, 1949, will be entitled to vote. Approval by the holders of 66⅔ percent of all outstanding common stock is required.

"The split-up would not become effective until after the dividend for the December quarter has been declared on the present stock. The first dividend on the split-up stock would be payable in March, 1950. The rate would be determined by the directors at their meeting next February.

"The proposed split-up should result in a wider and more satisfactory distribution of our common stock. It would not change the relative rights of any stockholder."

McRae Named Director

At the meeting John F. McRae was added to the board. Mr. McRae is president and a director of the Merchants National Bank, Mobile, Ala. The board of directors had previously voted to increase the number constituting the board from 17 to 18, thus creating the vacancy filled by the election of Mr. McRae.

Oppose ACL-FEC Merger

ATLANTA—A fight for control of the Florida East Coast R.R., was handed to a federal tribunal on October 13 for a decision.

The Florida DuPont interests and the Atlantic Coast Line have been battling for control of the bankrupt FEC for years. Smaller interests have aligned themselves with the DuPont factions.

The legal encounter came on the ACL's appeal of a Federal District court ruling which rejected a plan under which the ACL and the FEC lines would be merged or consolidated. The plan was approved by the ICC.

Opponents of the merger, headed by the St. Joe Paper Co., a DuPont concern, contend consolidation under the ICC-approved plan would be unfair and inequitable to holders of $45,000,000 in FEC refunding bonds. The ACL argued that the plan was a just and proper one.

Former Supreme Court Justice James F. Byrnes, attorney for St. Joe Paper Co., asserted the proposal does not satisfy or adequately compensate FEC bondholders for their investment in the line.

The ICC approved the merger by a six to five vote.

Mr. Byrnes contended that the plan was not one for reorganization, but actually constituted a sale.

Robert R. Milam, attorney for the S. A. Lynch interests at Miami, told the court the FEC now has some $23,000,000 cash on hand. He said bond holders could take $6,000,000 of this and purchase more common stock in Atlantic Coast Line than they would get in the stock issue provided in the proposed merger.

Disposition of the Florida East Coast line has been pending before the ICC and the courts almost 20 years. A receivership was established in 1931.

J. S. LEE

—of the Pollock Paper Corp., has been appointed assistant manager of the Middletown, Ohio, Division . . . B. F. Lacy, vice-president, will continue to exercise general supervision over Eastern operations . . . Mr. Lee has been with Pollock for 17 years, and most recently served as assistant to J. V. Melton, sales director for the waxed paper divisions, with headquarters in Dallas . . . H. G. Abernathy and Joseph Rosenstein have been named assistants to Mr. Melton.

Paper Crews' Pay to Stand

PORTLAND, Ore.—Paper mill workers in six communities of this area on October 19 agreed to a new contract which provides no basic wage increase, the International Brotherhood of Pulp, Sulphite and Paper Mill Workers reports.

The contract was negotiated for 35 mills belonging to the Pacific Coast Ass'n., of Pulp and Paper Manufacturers. These include paper making plants at St. Helens, Oregon City, West Linn and Lebanon, and at Camas and Longview, Wash. Paper mills at Vancouver, Wash., and Salem are not included in the new pact.

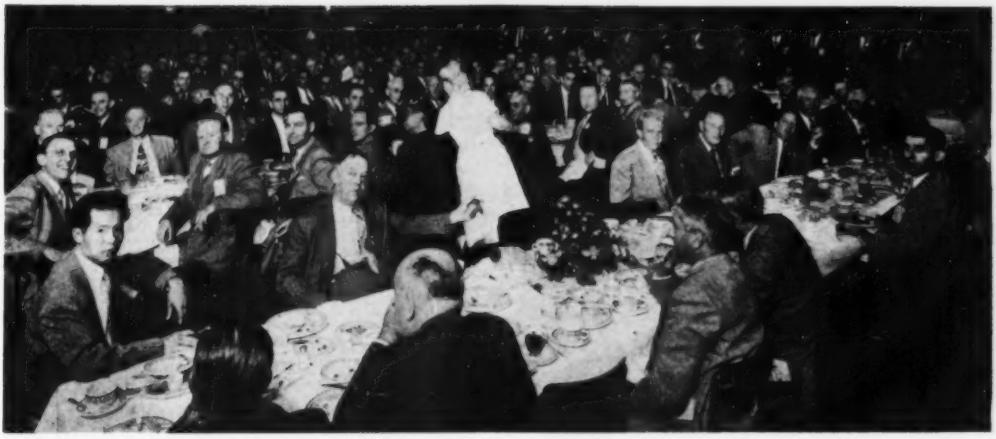
The agreement, reached jointly with the International Brotherhood of Paper Workers, provides concessions on holiday pay and vacations and a stronger night differential, it is reported.

Calder Scotches Groundless Rumors

NEW YORK—Alexander Calder, Sr., president of the Union Bag & Paper Corp., on October 17 disclosed that a large portion of its properties on the south bank of the Hudson River has been offered for sale through Cushman & Wakefield, New York.

The mailing of a prospectus describing the property apparently has been the source of some unfortunate rumors to the effect that Union Bag is leaving this area, Mr. Calder stated. On the contrary, he said, the move is one designed to increase the security of the Hudson Falls operations in a competitive market, by modernizing the plant layout and reducing costs.

The company has recognized for some time that certain of its Hudson Falls products could and should be produced more economically at Savannah. Its waterproof papers, for example (under the brand name "Scutan"), are manufactured from paper which is made at the Savannah mill, and the major part of the finished Scutan has been shipped back to the multiwall bag factory at Savannah for use as liners. Consequently the Scutan machines are being transferred to Savannah, and



SOUTHERN CALIFORNIA PAPER MILL MEN'S CLUB 15TH ANNUAL HI-JINKS

Over 400 members of the Southern California wholesale paper and twine industry were entertained by the Paper Mill Mens' Club of Southern California with a day of golf, sports and dinner followed by a floor show in the evening, at Oakmont Country Club, Glendale, Calif., on September 30 . . . After dining welcoming remarks by Hi-Jinks general chairman, C. J. Warren of the Paper Container Mfg. Corp.; club president, Jack Leiser of the Pioneer Wrapper Co., and A. C. Ames of S. E. Rykoff Co., Los Angeles, accepted the party on behalf of the jobbers . . . Presentations of golf and softball prizes were made, as well as of door prizes and special drawings . . . The paper mill men won a close game of soft ball from the jobbers during the afternoon sports events . . Success of the event was due to the capable committee, composed of Mr. Warren, general chairman; A. C. Flinn, Finance; Merle M. Paup, Comfort Paper Co., entertainment; Jack L. Perrin, golf; Frederick R. Ward, Powell River Sales Co., door prizes; J. C. Fischer, Sherman Paper Products Corp., program; Neil B. Sinclair, reservations; Lou Levine, Sterling Products, Inc., softball; Fred R. Schroeder, Sealright Pacific Ltd., official greeter . . . The following won golf trophies in the afternoon matches: R. E. LeGrant, Gerry Thiem, Hank Uhl, R. H. Anderson. Second prizes of one dozen golf balls each went to Emil LaVigne, Ray Godfrey, Sydney Smith III and H. A. Kittle . . . Current officers of the club in addition to President Leiser are: Irving E. Damon, Northern Paper Mills, vice-president; Roland Wolf, Graham Paper Co., secretary; and L. A. Gardiner, Nekoosa Edwards Paper Co., treasurer.

this move releases a considerable amount of excellent manufacturing space on the Fenimore side of the Hudson River which can be used for bag manufacture in the event the present bag factory buildings are sold.

With respect to the machine shop, Mr. Calder stated that although the company had received inquiries for its purchase, it is not included in the offering by Cushman & Wakefield; and that as a matter of fact, the shop operations are being stepped up and it now has a backlog of several months work consisting of new bag and printing machines needed by the company factories at both Savannah and Hudson Falls.

1948, Southern Kraft's Biggest Year

NEW YORK — With a total of $41,300,000 paid to farmers, wood dealers and timber dealers of the South; with nearly 13 million dollars paid to Southern railroads, barge and trucking firms; and with three and one-third million cords of wood delivered to Southern mills for conversion into paper, 1948 was the biggest year in the history of the Southern Kraft Division of International Paper Co., the company reported on October 20.

McNair Heads Minn. Employers

MINNEAPOLIS—C. I. McNair of the Northwest Paper Co., Cloquet, has been elected president of Minnesota Employers Ass'n., for the coming year.

Honshu Paper Mfg. Co., in New Home

TOKYO — The Honshu Paper Mfg. Co., Ltd., has moved from 3 Ginza 4-chome, Chuo-Ku, to No. 2 Kobikicho, 5-chome, Chuo-ku, Tokyo, Japan, Yoshio Ichikawa, director, reports to *Paper Trade Journal*.

Mr. Ichikawa has just returned from a trip to the United States, where he attended the Twenty-second Triennial Council of Phi Beta Kappa at the University of Wisconsin, and also visited the Forest Products Laboratory. On his way back to Japan he attended the 1949 Fall Meeting of TAPPI in Portland, Ore.

The Honshu Paper Mfg. Co., Ltd. is one of the three companies newly created out of the Oji Paper Co., which reorganized according to the Deconcentration Program of GHQ.

Fowler to N. Y., for Gould

NEW YORK—Joseph Fowler has been named sales representative of the Gould Paper Co. He will make his headquarters in the company's New York office, 100 East 42nd street. Previously he was on the sales staff of the Hollingsworth & Whitney Co., and before that was with the St. Maurice Valley Paper Co., now the Consolidated Paper Sales, Ltd.

St. Regis' Plantz to Chicago

DEFERIET, N. Y. — C. Henry Plantz, resident manager of the St. Regis Paper Co., has been transferred to Chicago, where he will become service manager of the manufacturing department, printing, publishing and paper division of the firm.

Mr. Plantz has been with St. Regis for the past 29 years. From 1920 to 1935, he was chief chemist at Deferiet. For the next three years he was in the laboratory of the company's Oswego plant before being assigned as plant manager at Harrisville where he served six years.

About five years ago, Mr. Plantz was named assistant resident manager of the St. Regis plant at Deferiet serving in that capacity until being appointed resident manager last July.

"Telling Management's Story" Panel

MINNEAPOLIS — "Telling Management's Story" was the topic of a panel meeting of the Northwestern Industrial Editors Ass'n., October 18 at Freddie's cafe. Panel members included F. D. Comeau, of the Minnesota & Ontario Paper Co., and James Keith, of the Minnesota Mining & Manufacturing Co.

Hoadley to Armstrong, December 1

LANCASTER, Pa. — Walter E. Hoadley, Jr., has been named company economist of the Armstrong Cork Co. He will assume his new duties on December 1. At present Mr. Hoadley is senior economist of the Federal Reserve Bank of Chicago, with which he has been associated since 1942.

Canadian Gov't Opposes Newsprint Price Cut

QUEBEC—Publishers of newspapers in the U. S., and producers of newsprint in Canada were asked on October 12 to visualize the possible problem of the press in non-dollar democracies seeking its raw materials from Russia.

The problem was suggested to 80 publishers and producers, meeting here for the sixth annual discussion of newsprint supply and demand, in a statement by the Newsprint Ass'n. of Canada.

It pointed out that in previous meetings discussion centered on difficulties in supplying U. S. consumers. Now there is a wider problem—the economic division of the Western world into dollar and non-dollar worlds. If the sterling world could buy no wood or pulp from dollar sources, Scandinavia would be its last hope.

"It needs no arithmetic," the statement said, "to realize that Scandinavian mills and forests cannot support the rest of our world, even at its meager level of present supply. The only other large non-dollar source of wood, the primary essential, is Soviet Russia."

The Canadian Government told Canadian newsprint producers, unofficially, that they should not reduce the export price of their product and that it would take a "very dubious" view of the industry if it gave up any of the ten percent premium it received as a result of devaluation. A five-dollar per ton cut in prices would cost Canada approximately 20 million dollars in U. S. funds, Government spokesmen asserted. Canadian newsprint sales in the U. S. total approximately 400 million dollars annually. The U. S. consumers intended to press for the price reduction, it was said.

Finance Department officials kept a close watch on the meeting, which they described as "critical".

The meeting was to review not only the price situation, but world newsprint demand. Canadian mills will plan their production for the coming year in the light of the meeting's findings.

W. G. Chandler, president of Scripps-Howard Supply Co., New York, said "useful statistical information" had been provided by producers for use of U. S., consumers, but that no mention of price discussions appeared on the official agenda of the meeting.

"U. S., publishers, present as guests of Canadian newsprint producers, were invited as individuals," Mr. Chandler said.

From the standpoint of the newsprint industry itself, production and supply costs are at an all-time peak now. This, the Government believes—and the industry concurs—justifies additional revenue through the ten percent premium on the U. S., dollar, it was said. However, from a technical marketing position, the Canadian industry's situation is none too strong.

The 30 percent devaluation in sterling area currencies as against the ten percent devaluation in the Canadian dollar already has lost the industry contracts in the United Kingdom and Argentina totalling 180,000 tons annually. This tonnage would have to be diverted to the U. S., market if it is to be sold, industry sources said.

R. M. Fowler, president of the Association denied that price considerations entered into the meetings proceedings.

"This and all previous meetings have dealt wholly with problems of supply and demand for newsprint," he said. "Matter of price do not enter into the discussions in any way. The present meeting follows the same pattern as all five previous meetings and confines itself to a statistical analysis of supply and demand.

Competitive action resulting from foreign currency devaluation is unlikely to affect this country's paper and pulp industry for the immediate future, an official of the American Paper & Pulp Ass'n. declared on October 20 in reporting on a closed meeting of the group's board of directors in the Waldorf-Astoria Hotel.

This view applied to pulp and paper products other than newsprint, it was noted. Devaluation and the related subject of reciprocal trade agreements were among problems explored at the meeting.

Canadian producers, it was pointed out, have been holding to their United States dollar prices, despite the ten per cent devaluation of the Canadian dollar. There are no indications that the Canadians will alter their present stand within the near future, the official said.

LEE TRENHOLM

—public relations manager of Provincial Paper, Ltd., Toronto, and Canadian vice-president of the Public Relations Society of America, elected president of the Assn. of Canadian Advertisers during the 35th annual convention of that group in the Royal York hotel, Toronto.

It had been feared, he continued, that lowered prices of Scandinavian pulp made possible by devaluation would "cut a hole" in the domestic market. However, these prices have been held at dollar levels, giving the Scandinavians a greater profit they appear reluctant to forego, he added. While the Scandinavian pulp price range of $118-$125 per ton was more than one-third greater a year ago, it is now close to the American price range of $118-$120 per ton.

Inquiries among publisher representatives on reports that a ten percent reduction of Canadian newsprint prices is due early next year revealed only that these reports are achieving wider circulation.

One publishing official here commented that a price cut "is long overdue," and suggested that it might be "kept under wraps" pending agreement on simultaneous action.

Canadian newsprint profits were attacked in the U. S., House of Representatives on October 20 by Rep. Paul W. Shafer (R.-Mich.), in the closing days of the session, who said: "Experts here have estimated that devaluation of the Canadian dollar and continuation of the old base price in the face of the ten-cents devaluation will give an additional profit of seven dollars a ton to Canadian mills. On the surface, the profit would appear to be ten percent, but some of the difference gained by the mills will be absorbed by higher costs of chemicals, coal and other materials which must be imported from us, and paid for in U. S. dollars.

"To offset the increased freight charges Canadian mills shortly after devaluation put a six percent surcharge back into effect," Rep. Shafer added. "As one of the members of the Special Newsprint Committee during the 80th Congress, I had a chance to study the newsprint situation firsthand, and I can assure you that newsprint manufacturers were not suffering under their former profits.

"Now they can stack huge profits atop those profits, all at the expense of American printers and publishers who represent the biggest single market for Canadian newsprint."

Clean-Up Progress Reported

APPLETON, Wis. — Two paper mills recently named in a Little Lake Buttes des Morts clean-up order of the State Committee on Water Pollution reported progress on work to abate pollution of the lake by their factory waste materials.

The Kimberly-Clark Corp., informed the committee on October 18 that it has invested $21,000 in equipment designed to reduce solids losses in paper making operations at its Badger-Globe plant, and the Bergstrom Paper Co., in an extensive report, noted it is planning installation of a recovery system for both water and solids.

Bergstrom also reported the engagement of a full-time technician

Who said it costs more to use Stainless Steel?

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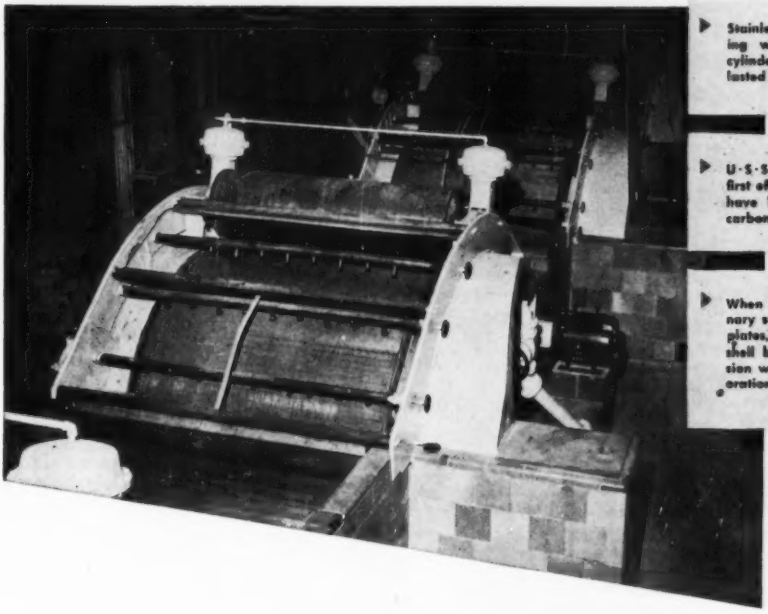

The law of survival of the fittest makes Stainless Steel the logical choice for winding and facing wire in this vacuum washer.

STAINLESS STEEL's ability to keep pulp and paper mill equipment longer on the job—to reduce shutdowns for repairs to a minimum—to materially decrease maintenance and cleaning costs, make Stainless Steel for many applications not only the most efficient but, in the long run, actually the *lowest-cost* material you can use.

The thing that gives Stainless Steel a marked *cost-cutting* advantage over other materials is its proved superiority: in resisting the inroads of corrosive attack; in preventing metallic contamination; in resisting erosion, wear and abrasion; and in withstanding extremes of heat and cold. These properties are inherent in the steel—they cannot wear off or chip off with use.

It is not mere coincidence that mills having the best production records are invariably large users of Stainless Steel—and are constantly extending its application. They've found that the difference it makes in performance is *always* greater than any difference in cost that its use may occasion.

In U·S·S Stainless Steels we offer you a complete family of perfected special-purpose steels that will meet almost any requirement of pulp and paper mill service. Our engineers are specialists in its use and will gladly assist you in selecting the proper type to ensure the greatest benefits from its application.

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9-1877

UNITED STATES STEEL

who is working on the solution of the problem of inking wastes, now a particular problem in connection with the disposal of sewage through the Twin City municipal sewage plant.

Meanwhile, state sanitary engineers reported on conferences with the executives of the paper mills named in the more recent lower Fox Rixer Valley clean-up order.

Theodore F. Wisniewski of the staff said he conferred recently about methods of sewage disposal improvements with executives of the Fox River Paper Corp., Appleton, with respect to its Telulah mill, and the Riverside Paper Corp., Appleton.

In a memorandum to the committee, he pointed out that although the Thilmany Pulp & Paper Co., Kaukauna, is one of the firms which has asked for a rehearing of the clean-up order, the firm is willing to comply with the orders and is merely taking necessary legal steps to safeguard its interests in the event it is impossible to comply in the time specified.

C. R. Scalborne of the company informed nim, the engineer said, that Thilmany continues to hold out hope for the approval of a reservoir control program on the Wolf and Fox Rivers that would allow better control of waste flow in that system and assure a stronger flow during low water summer season. The Fox River Improvement Ass'n., has again proposed a survey for such a project to the U. S. Engineers.

Dunn Marks Double Birthday

PORT HURON, Mich. — Dunn Paper Co., which turned out its first sheet of paper on October 9, 1924 on the birthday of its president and founder, Theodore W. Dunn, celebrated its silver anniversary on October 9, and honored three 25-year employes all in one gala birthday party.

Mr. Dunn presented gifts to the three at the dinner party attended by the company's 150 employes and guests. Among the guests were Mrs. Theodore W. Dunn and Mrs. George C. Dunn.

Mr. Dunn was introduced by Clifford O'Sullivan. The men honored were Charles E. Anglebrandt, chemical maker; Ernest J. Hookway, boiler operator; and Sheldon R. McPhail, master mechanic. William R. Walsh, introduced by George C. Dunn, executive vice-president and secretary, son of Theodore W. Dunn, reviewed the history of the company from the time it first began production.

Bergstromers Aid Community Chest

NEENAH, Wis.—Sixty-three percent of the employes of the Bergstrom Paper Co., had subscribed to the Community Chest fund campaign, with a large number of workers still to be contacted, Arthur Hedlund, Chest official, reported October 15.

Eighty-one of the subscribers signed for the "20-minutes-a-month" payroll deduction plan, one of the methods of contribution arranged by the Chest.

Westvaco Pension Plan Report

NEW YORK—A booklet reporting on the first year of the pension plan for hourly-paid employes of the West Virginia Pulp & Paper Co., is being mailed to members of the plan.

Facts and figures in the booklet were taken from reports submitted recently to the company by the Irving Trust Co., of New York, trustee, and Marsh & McLennan of New York, actuary. The booklet covers the main points of the plan's operations for the first year, ended May 31, 1949.

At the end of the first year 4,634 employes, about 94 percent of those eligible, were enrolled in the plan at the company's six plants. All hourly-paid employes over 30 who have been working for the company one year and are still in active service are eligible for membership.

Although the earliest date for retirement with full pension was June 1, 1949, one year after the plan was started, 35 employes took advantage of an early retirement clause and began drawing reduced pensions during the first year. The booklet reports that 143 additional employes are eligible to retire with regular pensions during the second year of the plan, which began on June 1.

In the booklet the company again employs the cartoon figure of Mr. Quiz, a little man with a question mark figure who was used in both a booklet and slide film to explain the original plan to employes when it was installed last year.

Cola Parker Addresses K. C. Vets

NIAGARA FALLS, N. Y. — The Kimberly-Clark Corp. paid special recognition to the 90 members of the Niagara Falls chapter of its Quarter Century Club, and their wives, at a dinner in their honor in Hotel Niagara's crystal ballroom, October 14.

Nine new members, each with 25 years of company service, were inducted in installation ceremonies conducted by Fred Van Liew, manager of the plant. The new members were awarded certificates of membership and $100 U. S., saving bonds by Cola Parker, president of the corporation, who was principal speaker of the evening.

In commending the quarter-century employes, Mr. Parker recalled that Kimberly-Clark first built a mill here less than 30 years ago. "It is remarkable," he noted, "that there already are 90 members in the 25-Year Club" and "also that the average service period is 28 years."

Public Relations Publicized

OTTAWA — "Public relations is the creation and use of policies, which if sincerely practiced and effectively made known, will be reflected in public good will," Rielle Thomson, director of public relations of the Canadian Pulp & Paper Ass'n., told a large gathering here in the first of eight addresses on public relations sponsored by the Advertising and Sales Club.

Illustrating the increasing impact of public opinion on commerce and the effect of large corporations on every household, he showed that it was necessary that the public be informed of business practices and policies of goodwill was to be maintained.

In accomplishing this purpose, Mr. Thomson emphasized the significance of sincerity. "Public relations is essentially a person-to-person business which does not lend itself to exaggerated or distorted claims," he declared, with his address stressing the importance of public relations in modern business.

It is not the duty of the public relations man to insure goodwill between his firm and the public on the board of directors' level only, but on the employes' level as well, he said. "A business of any size can lose goodwill if its employes are not public relations conscious," he emphasized.

Paper Specialties Lecturing

ORONO, Maine — Maine paper mill executives will lecture this Fall to students of pulp and paper technology at the University of Maine. Among the lecturers will be:

D. B. Demeritt of the Dead River Co., Bangor, on Woods Operations; C. A. Redden, chief engineer of the Hollingsworth & Whitney Co., Waterville, on Preparation of Wood Pulp; R. M. Hume, superintendent of the Great Northern Paper Co., Millinocket, on Mechanical Pulping; J. G. L. Caulfield, assistant technical director of the Eastern Corp., Bangor, on Sulphite Pulping; John Darrah, chemical engineer of the Penobscot Chemical Fibre Co., Great Works, on Preparation of Sulfur Dioxide; James H. Snyder, sulphite superintendent of the St. Regis Paper Co., Bucksport, on Sulphite Acid Systems; Dr. T. H. Werner of the S. D. Warren Co., Cumberland Mills, on Caustic Pulping; Linwood Willins, research chemist of the Oxford Paper Co., Rumford, on Chemical Recovery; Dr. J. L. Parsons, research director of the Hollingsworth & Whitney Co., on Bleach Systems and Cholorine Bleach; and Leonard Pierce of the St. Regis Co., on Peroxide Bleach.

Engineers Visit Sanitary Paper Mills

EAST HARTFORD, Conn. — Some 70 members of the Hartford Engineers Club on October 20 visited the Sanitary Paper Mills here to inspect the $300,000 paper-making machine installed six months ago. R. C. Comins, mill president, conducted the engineers through the plant.

Richards to Crocker-McElwain Co.

HOLYOKE, Mass.—Vincent Richards, formerly superintendent at the Keith Paper Co., Turners Falls, has been named superintendent of the No. 1. machine section at the Crocker-McElwain Co., here, succeeding Frederick L. Stapley, who has retired.

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The Round River of Michigan gave Paul Bunyan the run-around in getting his logs to market. It froze so solid in the Year of the Two Winters that Paul hitched up Babe and yanked the river straight.

A reproduction of this incident from the fabulous life of Paul Bunyan — the forty-seventh of a series — will be sent on request. It will contain no advertising.

Bonus Marks 70th Scott Anniversary

CHESTER, Pa.—Scott Paper Co., announced a "quality dividend" of an extra full week's pay for each of its 4,000 employes at ceremonies commemorating the 70th anniversary of the company's founding, held simultaneously at the firm's Fort Edward and Glens Falls, N. Y., plants, at Marinette, Wis., Sandusky, O., Hoboken, N. J., Chester, Pa., where its line of paper products are produced, and at the pulp-making plants on the Pacific Coast.

"We call this a 'progress through quality dividend'," Raymond C. Mateer, executive vice-president, said, "because we want our people to know that it is through the quality of their work that Scott Paper Co., has prospered during the 70 years of its existence."

Bailey Addresses 25-Year Men

NIAGARA FALLS, N. Y.—During the last three years the International Paper Co. has spent almost $2,000,000 in its local mill, H. P. Bailey, superintendent, told those attending a dinner in honor of 25-year employes at Hotel Niagara.

The mill goes into special types of papers such as twisting, saturating, display papers, special cup papers, etc., he reported and told of the efforts made to keep orders coming in during the "so-called business recession."

From the Tonawanda plant, 24 were honored. C. W. Youngchild, superintendent of the Tonawanda mill, offered congratulations to the new club members.

Mead Sells Dill & Collins Plant

PHILADELPHIA—The Dill & Collins paper plant here, closed on April 15, has been sold by the Mead Corp., Chillicothe, Ohio, the Jackson-Cross Co., selling agents, reports. The buyer, Henry Smink, will hold title for an investing syndicate which will demolish some of the buildings and erect others for lease to manufacturers for factory and warehouse space.

The plant consists of a group of one to four-story buildings, with approximately 400,000 square feet of space, on 22 acres of ground. The sale price was not disclosed, but the property is assessed at $360,000.

Hotchkiss Executive Award Winner

CLEVELAND — David H. Hotchkiss, credit manager and auditor of the Petrequin Paper Co., was honored with the Executive Award of the Executives' School of Credit and Financial Management of the National Ass'n., of Credit Men on the occasion of his recent graduation from this school, which is conducted at the University of Wisconsin.

Hot Meals on Wheels

DALHOUSIE, N. B. — A reconverted conference room and installation of all-metal service wagons at the plant of the New Brunswick International Paper Co., now provides hot meals on the job for employes. As a result of the innovation, workmen can eat their meals without leaving their machines, thus effecting a valuable saving of time during rush periods.

The former conference room now houses a lunch counter with a seating capacity of 75 and facilities to handle the service carts.

E. S. Corp. Picks Up Its Preferred

NEW YORK — Eastern States Corp. reported on October 18 that 27,471 shares of its preferred stock were tendered under its exchange plan, which expired on September 30. Included were 9,006 shares of Series A preferred and 18,465 shares of Series B preferred.

In return Eastern States distributed to stockholders 234,857 shares of common stock of the St. Regis Paper Co. and paid $125,425 in cash. Eastern States will retire the preferred shares which were tendered, leaving outstanding 30,994 shares of Series A and 41,535 shares of Series B.

Aiding N. Y. Travelers Aid Drive

NEW YORK—Six committees of men in the paper and related fields are active in the current drive for $350,000 for the Travelers Aid Society of New York.

Chairmen of the committees are: Donald C. Hardenbrock, vice-president, Union Bag & Paper Corp.; Thomas A. Magee, president, Gray Envelope Mfg. Co.; George Gray, president, Henry Lindemeyer & Sons; James F. Levens, president, George W. Millar & Co.; Norman F. Greenway, vice-president, Robert Gair Co.; and A. E. MacAdam, 3rd, president, A. E. MacAdam Paper Co.

Making Stock Available to Employes

ST. PAUL—The Minnesota Mining & Mfg., Co., is offering 75,000 shares of its npv common stock for sale to its employes under an "employe stock purchase plan" adopted September 16. The proceeds will be used for general corporate purposes, which may include retirement of a portion of the company's 2¾ percent debentures, due 1967, or its $4 preferred stock. The five wholly-owned subsidiaries are Inland Rubber Co., National Synthetic Rubber Corp., Mid-States Gummed Paper Co., National Advertising Co., and Empire Advertising Co.

Botwood Fuel Oil Tanks

BOTWOOD, N.F.—Two large oil tanks have been constructed here by the Anglo-Newfoundland Development Co., in its plans to use oil instead of coal, providing steam for the boilers and digester plant. The tanks, which hold approximately 12 million gallons, measure 140 feet in diameter and stand 40 feet high. Oil will be supplied by tanker through 16-inch pipes and will be transferred to Grand Falls by tank cars. Approximately 90,000 tons of coal are usually brought into Botwood annually.

National Container Modernizing

JACKSONVILLE, Fla.—A new precipitator will be installed at the National Container Corp., pulp mill plant here. Total expenditure for new equipment will amount to $650,000 of which $100,000 will be for the precipitator.

General Manager W. T. Webster said the remaining $550,000 is for a new black liquor recovery unit. A new building will cost approximately $175,000 and another $375,000 will be expended for the recovery equipment. Mr. Webster expects the mill to be completed and the units installed by Spring.

Messner to Sangamon

EATON, Ind. — Ollie W. Messner, formerly with Empire Box Corp., Stroudsburg, Pa., is now superintendent and production manager of the mill of the Sangamon Paper Mills, Inc., here.

This mill has been changed over from .009 straw to high grade boxboard. The present production includes such folding grades as bleached manila, white vat lined board, and patent coated board. The paper machine installation consists of an 81-inch, seven cylinder machine.

Eddy's Belleville Plant Operating

BELLEVILLE, Ill.—The Eddy Paper Corp. has opened its new corrugated box plant at Twenty-ninth and Otto streets, with Harvey Moore as resident manager. The one-story plant building is of brick and steel sash construction and contains 100,000 square feet of floor space. It is expected that 150 workers will be employed in the manufacture of about 2,200 tons of corrugated boxes per month. The firm will have district and sales offices at 408 Olive Street, St. Louis. Nicholas Scharff is district manager.

Holyoke Interim Elections

HOLYOKE, Mass. — Robert C. Cameron, an employe of the Chemical Paper Mfg., Co., was elected temporary president of Eagle Lodge of Papermakers, AFL, on October 19, to serve until the regular election of the union scheduled in December. He succeeds Henry F. Wilson, resigned.

Chosen as vice-president, also to serve until December, was William McFadden, employed by the American Writing Paper Corp., who replaces Earl F. Farr, resigned.

Kimberly-Atlas Management Club

KIMBERLY, Wis. — E. V. Johnston and J. C. Simonich of the staff of the Kimberly-Clark Corp., were special guests of the Kimberly-Atlas Management Club at a safety meeting here October 17. Austin G. Trull, the principal speaker, was introduced by the club's president, T. E. Lamers.

Douglas St. Regis Vice-President

NEW YORK — V. C. Douglas was elected a vice-president of the St. Regis Paper Co., on October 21.

Stewart S. A. Fund Drive Head

CORINTH, N. Y.—Milton W. Stewart of the International Paper Co., has been named chairman of the Salvation Army drive here. He is continuing the work he did last year.

Union presidents will collect at the IP; William Cromie, fireman and oilers; George Milligan, papermakers; and Arthur Nott, pulp and sulphite workers.

Stevens' Kaiser Windsor Trust Director

WINDSOR, Conn.—C. Julian Kaiser, vice-president and general manager of the Stevens Paper Mills, Inc., has been elected a director of the Windsor Trust Co., of Hartford. Stevens Paper Mills, Inc., owns the former Hampshire Paper Co., plant in South Hadley Falls and operated it during the war and afterwards until earlier this year. That plant is closed for the present.

Hollingsworth, Rotary Speaker

MILTON, Mass. — Amor Hollingsworth, Jr., president of the Tileston Hollingsworth Paper Co., spoke at the Milton Rotary Club meeting at Cunningham Gymnasium early this month, reviewing paper making from the beginnings of the business in Milton Village to the present successful mills now operating in Hyde Park.

Crown Willamette Paper School

CAMAS, Wash. — The Crown Willamette Paper School, which annually offers free educational opoprtunities in the pulp and papermaking field to Crown Zellerbach employes, opened on October 18 with a first-year class lecture by F. R. Sievers on the "History and Romance of Paper."

Rushmore Appoints Cleveland Distrib.

CLEVELAND—J. W. Smith and A. G. Swinton of the Smith & Swinton Co., 1200 W. 9th street, have been named exclusive brokerage representatives here for the Rushmore Paper Mills, Inc., of Gouverneur, N.Y.

Parsons' Cooley Marks Anniversaries

HOLYOKE, Mass.—Elmer B. Cooley, treasurer of the Parsons Paper Co., on October 20 celebrated his 60th anniversary with the company. He joined Parsons at the age of 13 as an office boy.

Best Heads C. of C. Committee

BUFFALO, N. Y.—John C. Best, vice-president of the National Gypsum Co., has been appointed chairman of the International Affairs Committee of the Buffalo Chamber of Commerce.

Map Paper Contract Award

WASHINGTON — A contract for 1,000,000 pounds of map paper, to cost $142,100, has been awarded to Crocker-Burbank Papers, Fitchburg, Mass., by the Army.

Newton Falls Mill Safety Winner

SYRACUSE, N. Y.—Newton Falls Paper Mill, Inc., has been awarded a plaque in a state-wide insurance fund accident prevention contest.

Riegel Appoints Segur Controller

NEW YORK—John A. Segur has been appointed controller of the Riegel Paper Corp., to have charge of all of the company's cost accounting and general accounting procedures. He will make his headquarters at Riegel's Milford, N. J., plant.

Anderson Council Program Leader

BOSTON — Stanley R. Anderson, of the S. D. Warren Co., was one of several among business leaders participating in discussions at a recent advisory council program at Nichols Junior College.

Rayonier Shelton Div. Resumes

HOQUIAM, Wash. — Rayonier, Inc., resumed operations at its Shelton division on October 17. The pulp mill is on a normal full-time schedule of seven days a week requiring the full complement of employes.

Warren Red Feather Leader

BOSTON — The S. D. Warren Co., was among firms reporting early in the Boston Red Feather Community Fund Campaign, with a contribution equal to or larger than last year's.

FORESTRY

Forest Associations To Oppose CVA

PORTLAND, Ore. — A new organization, the Oregon Forest Industries Council (organized to oppose CVA), was formed here on October 18 in the belief a Columbia Valley administration would "impair good forest practices in the state of Oregon."

The group was launched by representatives of leading forest industry associations in the state.

Included were the West Coast Lumbermen's Ass'n., Western Pine Ass'n., Western Forestry & Conservation Ass'n., Willamette Valley Lumbermen's Ass'n., Southern Oregon Conservation & Tree Farm Ass'n., Oregon Plywood Industries, Oregon Pulp & Paper Industries, and the Pacific Northwest Loggers Ass'n.

Charles E. Ogle, secretary-manager of the new organization, declared adoption of CVA would place "the natural resources, in fact the entire economy, of the Northwest under the control of three men who would not necessarily have an interest in or a knowledge of good forestry practices."

"The controversy to date over the proposed CVA has been stated by proponents to be a public-versus-private-power issue and any reference to the hamstringing features of the bill to all Northwest industries has been studiously avoided," Mr. Ogle declared.

The group, which Mr. Ogle said would be active only so long as CVA is an issue, chose Robert E. Baker of the Sunset Logging Co., as treasurer and planned to elect other officers later.

Chosen on the executive committee were William Swindells, Willamette Valley Lumber Co., Edmund Hayes, lumberman, Truman Collins, Collins Pine Lumber Co., Charles W. Fox, Cascade Plywood Corp., all of Portland; and George M. White, St. Helens Pulp & Paper Co., St. Helens.

Named as alternates were Harris Smith, secretary, West Coast Lumbermen's Ass'n.; Ernest L. Kolbe, chief forester, Western Pine Ass'n.; William Hagenstein, forest conservation committee of Pacific Northwest Forest Industries; Gus Arneson, Springfield Plywood Corp., Springfield; and Joseph R. Frum, Crown Zellerbach Paper Co.

Also present were E. T. Nero, Western Forestry & Conservation Ass'n.; Nils Hult, Willamette Valley Lumbermen's Ass'n.; Glenn Jackson, Southern Oregon Conservation & Tree Farm Ass'n.; and Cole Wheeler, Pacific Northwest Loggers Ass'n.

C. EDWARD STOUT

—Atlanta newspaperman, has been named southern manager of the American Forest Products Industries, Inc. Mr. Stout, formerly information and education chief for the Georgia Forestry Commission, will maintain headquarters at New Orleans 1033 Canal building. He succeeds Clyde J. Baser who is retiring to operate citrus groves in Florida. Mr. Stout will travel Florida, Georgia, South Carolina, North Carolina, Alabama, Mississippi, Louisiana, Texas, Arkansas, Oklahoma and Tennessee . . . AFPI sponsors the Keep America Green and American Tree Farm programs.

Timm Honored for Public Service

OTTAWA—Dr. W. B. Timm, Director of the Forests, Mines and Scientific Services Branch, Department of Mines and Resources, Canadian Government, was presented with a scroll signed by the Minister, Hon. Colin Gibson, and a grandfather clock on the occasion of his retirement after 36 years in the public service. More than 300 colleagues attended the presentation and tea which followed.

Teaching Student Teachers

OTTAWA—Students at Ottawa Normal School and the University of Ottawa Normal School, gained first-hand knowledge of the value of reforestation and the economy of handling timber tracts recently when they toured several forests recently.

Leader of the tour was W. Ernest Steele, Rideau District Forester for the Ontario Government, with others including D. W. McLean of the Canadian Government Forestry Service and J. E. Smith of the Ottawa Normal School's Science Department.

First on the tour itinerary was the property of S. H. Morris, near Rockland, where they saw one of the finest stands of red pine in Canada. Started in 1914, when 16,000 seedlings were planted on the 15-acre area, the plantation was partly thinned in 1938, with part left unthinned for experimental purposes. Growth was twice as good, in terms of saleable lumber, in the thinned area. The project was operated by Mr. Morris in co-operation with the Canadian Government's Forest Service. The students learned of the blight of the weevil that stunts and deforms the white pine, with the blister rust that kills it.

The tour visited "Larose Plantation," near Bourget, Ont., where a 15,000-acre section of non-productive land is being used for reforestation in a cooperative scheme by the Ontario Government and Prescott and Russell Counties. Here fire-fighting equipment was demonstrated. In addition, part of the 6,500 acres planted were shown. The students saw a three-man crew demonstrate machine and hand planting. They saw natural woods and plants from one to 22 years old in the plantation.

Assisting in the field trip were John Halpenny and Art Walroth, Zone Foresters in the Ontario Department of Lands and Forests.

Popularizing Forestry Education

MOBILE — "How Money Grows on Trees" is the title of a cartoon strip style booklet now being issued by the Southern Kraft Division of the International Paper Co. The booklet is being distributed to schools throughout the South, free of charge. In a supplementary booklet, "Suggestions for Teachers," by James J. Heaphy, B.S., M.S., the following statements, among others, appear:

"'How Money Grows on Trees' contains an important message for the people of the southern states about the development of one of our natural resources, the southern forests.

"As a teacher, you will see at a glance the economic and social implications of this problem and the importance of carrying this message to a specific audience. Although the use of the so-called comics technique as a teaching tool may be a new experience, you will recognize that this medium, more properly identified as 'color continuity' is ideally suited to these purposes.

"Because it can be carried into the home by the pupil, it is our hope that this message will be read by the adults in the family as well as the school child. Furthermore, the facts and concepts will go into the home accurately and completely.

"This booklet has been carefully prepared as a valid teaching aid, designed to do a specific job in helping the teacher to present a worthwhile educational topic in an interesting manner. It should be used with all the care and planning that accompany the classroom use of any other teaching aid."

The supplement contains chapters on "Suggestions for Classroom Use," for "Use in Elementary Schools" and for "Use in Agricultural Schools."

Gingerich Retiring, Beck Successor

LUKE, Md. — William R. Gingerich, veteran buyer who has purchased more than 1,750,000 cords of pulpwood in the Appalachian states, will end his long career with the West Virginia Pulp & Paper Co., on October 31. Mr. Gingerich, now 65, is manager of the pulpwood procurement department of the Luke, Md., mill. He has given more than 45 years of service to the company. Succeeding him is C. A. (Al) Beck, an employe of the company for 32 years, who has been Mr. Gingerich's assistant at Luke since 1946. Mr. Beck is the third generation of his family to work for the paper company.

McDonald Teaching Farm Forestry

QUEBEC — Farm forestry is to become an important research and teaching subject at McDonald College, according to Dr. W. H. Brittain, vice-president and Dean of the Faculty of Agriculture. An arboretum comprising 372 acres of the 1,000-acre Henry W. Morgan estate acquired by McGill University, with which Macdonald College is affiliated, will be used for woodlot management demonstrations and ecological as well as botanical studies.

Large Quebec Land Purchase

QUEBEC—The Quebec Government's acquisition by purchase of the 900-square mile territory of Mingan, stretching 150 miles along the St. Lawrence north shore, by cash payment of $900,000 to the British-controlled Labrador Co., is expected to open up 16,260 square miles of forestry concessions as well as other natural resources, including over 460,000 horsepower in hydro-electric resources, according to estimates.

Dues, Bonuses, Etc., $6,855,031

OTTAWA—Timber dues, bonus, etc., provided $6,855,031 in net ordinary revenue for the Province of Ontario in the fiscal year ending March 31, 1948, as compared with $6,994,104 in the preceding fiscal year.

Speed Marks Passage of Senate J.R.53

By RICHARD LA COSTE

WASHINGTON, D. C.—Unprecedented speed marked the passage of Senate Joint Resolution 53 and enacted into law through Presidential signature. The measure, known as the Anderson-Mansfield bill, calls for an accelerated program of reforestation of forest lands in the National Forests. President Truman signed the bill on October 11.

The resolution has a forest revegetation counterpart.

Under the law a 15-year program of continuing reforestation will be undertaken with appropriations authorized in progressively increasing amounts amounts ranging from $3 million for fiscal year 1951 to $10 million for fiscal year 1955 and a like amount each year thereafter until 1965.

Some four million acres of potentially productive timberland within the national forests, now denuded or unsatisfactorily stocked, will be reforested as funds are made available by the Congress.

Urge Grants For Pollution Research

By RICHARD LA COSTE

WASHINGTON, D. C.—Special grants for pollution research projects having sectional or national significance has been recommended by the 11-man Water Pollution Control Board appointed last February by President Truman. Mark D. Hollis, assistant surgeon general, is chairman of the board.

Completing its second meeting in Washington on October 3-4, the board suggested that preference be given those pollution control projects in which industry would cooperate either with funds or skills. This indicates the board believes the industrial wastes disposal problems is primarily the responsibility of industry.

Mr. Hollis told *Paper Trade Journal* the grants would enable the Public Health Service to work in closer cooperation with industry. "These grants, of course, are to the municipalities themselves and not to industry," he explained.

400,000 More Free Seedlings

SAVANNAH, Ga.—As the result of a forest conservation program sponsored jointly by Union Bag & Paper Corp., and S. A. Allen, Inc., pulpwood shipper, an additional 400,000 slash pine seedlings are expected to be planted in Chatham, Effingham, Bryan and Bulloch counties within the next three months according to J. J. Armstrong, general manager of Union Bag's woodlands division and Harold W. Allen, president of the pulpwood shipping concern, these trees will be distributed free of charge this year to private landowners in the four South Georgia counties interested in putting idle acres back into production.

Mr. Allen commented: "In addition to the free seedlings, S. A. Allen, Inc.,

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will furnish tree planting machines and we understand Union Bag will make available technically trained personnel to those receiving the young trees. There will be no charge for either the tree planter or the services of the forester.

Ralph Helmken, conservation forester for Union Bag and Paper Corp., will be in charge of the distribution of the seedlings and instructions in correct planting techniques.

N. C. Logging Eqpt. Demonstration

RALEIGH, N. C.—Hand and power tools, skidders, tractors, handling equipment, sawmills, and accessory equipment were exhibited at a logging equipment demonstration near the Fair Grounds October 25-26. This was the first big regional logging show in the Southeast.

Co-sponsors of the demonstration were the Division of Forestry, North Carolina State College, the Southeastern Forest Experiment Station, and the Virginia-Carolinas Section of the Forest Products Research Society.

Rush Fir Seedling Planting

NISQUALLY, Wash. — Lifting and packing 700,000 noble fir seedlings at the Forest Industries tree nursery here is being rushed in an effort to complete the planting in high mountain areas before snow covers the ground. W. D. Hagenstein, forest engineer of the forest conservation committee of the Pacific Northwest Forest Industries, said on October 13 that this year's crop of 9,500,000 seedling trees is the largest in the history of the eight-year-old loggers' tree nursery.

Management Service Offered

LITTLE ROCK — The State Forestry Division on October 13 disclosed that a new forest management service had been offered to landowners in 25 counties.

Forester Fred Lang said the program is designed to give timber producers a profitable system of selecting, cutting and marketing timber.

ASSOCIATIONS . . .

Nat. Safety Congress and Expo.

CHICAGO—Talks by leaders in some of America's largest companies will highlight the program of this year's National Safety Congress and Exposition, to be held at the Palmer House, the Stevens, Congress, Morrison and LaSalle hotels, October 24-28. Pulp and Paper Section meetings are scheduled at the Stevens hotel as follows:

October 24—Monday

2:00 Progress Report. *General Chairman*—R. W. CROUCHER, Safety Officer, Minnesota & Ontario Paper Co., International Falls, Minn.

2:15 Address. D. J. HARDENBROOK, Vice-Pres., Union Bag & Paper Corp., New York City (Introduced by C. L. R. DOUGHERTY, Secy., Pulp & Paper Section.)

2:45 Report of the Nominating Committee and Election of 1948-50 Officers. J. FRED BERRY, Personnel Mgr., Alton Box Board Co., Alton, Ill.

October 25—Tuesday

Presiding: GEORGE W. HARPER, Dir. of Safety, The Mead Corp., Chillicothe, Ohio.

2:00 Finding the Accident Facts. E. A. PAGE, Personnel Supt., Kimberly-Clark Corp., Neenah, Wis. (Introduced by A. E. Minor, Chairman, Pulpwood Logging Div.)

2:30 Visual Education in the Mills. J. A. DRAPER, Dir. of Safety, Consolidated Paper Corp., Ltd., Grand'Mere, P. Q., Canada. (Introduced by C. L. R. DOUGHERTY, Secy., Pulp & Paper Section.)

3:00 Unusual Accidents in Paper Mills. O. J. SHERMAN, Safety Supvr., Gaylord Container Corp., Bogalusa, La. (Introduced by D. V. HILL, Chairman, Paper Manufacturing Div.)

3:30 Specific Safety Techniques. EDWARD G. BRUTZMAN, Head, Safety & Medical Depts., Industrial Relations Div., Wagner Electric Corp., St. Louis. (Introduced by John W. MEINHARDT, Paper Products Div.)

October 26—Wednesday

(1) Pulpwood Logging. *Presiding*—A. E. MINOR, Safety Supvr., The Ontario-Minnesota Pulp & Paper Co., Ltd., Kenora, Ont., Canada. *Conference Expert*—W. C. HARRISON, Industrial Relations Dept., Abitibi Power & Paper Co., Ltd., Toronto, Ont., Canada. *Conference Leader*—R. O. HELBERG, Safety Eng., Employers Mutual Liability Insurance Co., Ironwood, Mich.

(2) Sulphite Pulp Manufacturing. *Presiding*—J. A. DRAPER, Dir. of Safety, Consolidated Paper Corp., Ltd., Grand'Mere, P. Q., Canada. *Conference Expert*—E. V. JOHNSON, Safety Supvr., Kimberly-Clark Corp., Neenah, Wis. *Conference Leader*—DOUGLAS B. CHANT, Secy.-Eng., The Ontario Pulp & Paper Makers Safety Assn., Toronto, Ont., Canada.

(3) Sulphate Pulp Manufacturing. *Presiding*—E. B. LAMBTON, Safety Eng., St. Regis Paper Co., New York City. *Conference Expert*—D. E. HENRY, Safety Coordinator, Southern Advance Bag & Paper Co., Inc., Hodge, La. *Conference Leader*—R. W. GRAY, Safety Dir., Union Bag & Paper Corp., Savannah, Ga.

October 27—Thursday

12:30 Noon—Luncheon. *Presiding*: GEORGE W. HARPER, Dir. of Safety, The Mead Corp., Chillicothe, Ohio. (1) Contest Report. A. SCOTT DOWD, Pres., Fritz Publications, Inc., Chicago. (2) Edward Benton Fritz Memorial Trophy. MRS. EDWARD BENTON FRITZ, Vice-Pres. & Treas., Fritz Publications, Inc., Chicago. (Introduced by A. SCOTT DOWD.) (3) National Safety Council Trophies. R. W. CROUCHER, Safety Officer, Minnesota & Ontario Paper Co., International Falls, Minn.

2:00 P.M. (1) Paper Manufacturing. *Presiding*—D. V. HILL, Safety Dir., Kingsport Div., The Mead Corp., Kingsport, Tenn. *Conference Expert*—A. E. TOPMILLER, Supvr. of Safety, Champion Paper & Fibre Co., Hamilton, Ohio. *Conference Leader*—ARTHUR CARLE, Safety Dir., The Northwest Paper Co., Cloquet, Minn. (2) Paper Products. *Presiding*—W. H. MCLAUGHLIN, Dir., Safety & Sanitation, Lily-Tulip Cup Corp., Long Island, N. Y. *Conference Expert*—C. H. KEMP, Safety Dir., Thilmany Pulp & Paper Co., Kaukauna, Wis. *Conference Leader*—JOHN W. MEINHARDT, Safety Dir., Gaylord Container Corp., St. Louis.

Two NAWMD Meetings Set

NEW YORK—Meetings for the Southeastern, Southern and Southwestern area Divisions of the National Ass'n. of Waste Material Dealers, Inc., have been called by Clinton M. White, managing director.

The Southeastern and Southern Divisions will hold a joint meeting November 1 in the Atlanta Biltmore hotel, Atlanta, Ga., for members and other interested wastematerial dealers.

The Southeastern meeting, which which will be held November 4 at the Adolphus hotel, Dallas, Tex., will be a revitalization event for that area, which has recently been re-organized.

Leo J. Kelleher, of the Southern Converting Co., of Greensboro, N. C., is chairman of the Southeastern Division, which includes the Carolinas and Virginia.

Chairman of the Southern Division is Louis B. Cline of Cline & Bernheim, Nashville, Tenn.; with David Koplin of the Georgia Paper Stock Co., Inc., Atlanta, Ga., vice-chairman. The area includes Tennessee, Kentucky, Florida, Georgia, Alabama, Mississippi and Louisiana.

The Southeastern Division, which is co-chairmanned by Jean B. Charak, of the Federal Paper Stock Co., St. Louis, and Bernard Schaenen, of Commercial Metals Co., Dallas, Tex., includes Texas, Oklahoma, Missouri, Arkansas and Kansas.

Because of the nature of the Divisions involved, these two meetings will be devoted to apprising members and interested dealers of the present conditions in the industry, as well as some of the activities which are being planned.

Definite programs will be announced in the near future. Mr. White and James T. Flannery of the James T. Flannery Co., Jersey City, N.J., NAWMD president, will attend both gatherings.

Pre-Makeready of Printing Plates

CHICAGO—"Pre-makeready of Printing Plates" will be the topic of the November meeting of the Chicago Section, TAPPI, at the Chicago Bar Association, 29 S. La Salle street, on November 21. Dinner will begin at 6:30 p.m.

Speaker will be Bert Rike, technical executive of the Lake Shore Electrotype Co., Chicago, who will explain the Bishop-Stansell method of treating printing plates to lower highlights, middletones and type areas in order to improve the printing quality, lower the cost of makeready and increase the life of the printing plates.

Joint Meeting in Niagara Falls, N. Y.

NIAGARA FALLS, N. Y.—The next regular meeting of the Western New York Group, Empire State Section of TAPPI, will take place on November 9 at the Prospect house. This will be a joint meeting with the Niagara Branch of the Technical Section of the Canadian Pulp & Paper Ass'n. Dinner will be served at 7:15 P.M. John P. Burke, president-secretary of the International Brotherhood of Pulp, Sulphite & Paper Mill Workers (AFL) will speak on "Trade Unions and American Industry."

Cheever, Woodbridge, Oct. SAPI's

NEW YORK — Admitted to membership to the Salesmen's Ass'n., of the Paper Industry in mid-October were: David Cheever, Jr., of the Hollingsworth & Whitney Co., Boston; and W. W. Woodbridge of the Chicago office of the Hammermill Paper Co.

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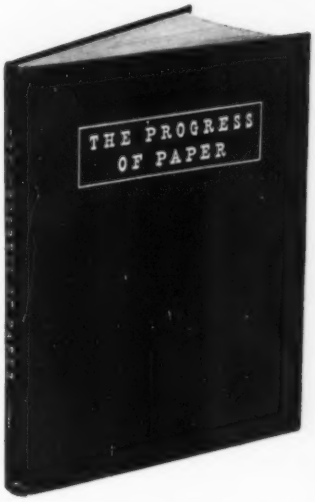

Brief Summary of Contents

Map of origin of paper, Egypt to the Near East. Also map of area of invention and progress of production. Illustrated with drawings and photographs of actual material, some of ancient origin, dating from 2,000 B.C. to 1300 A.D.

European development.

Spain, Italy, Greece, France, Belgium, Holland, Germany, Poland, Russia, England, to 1800 A.D.

Invention of machines, expansion in Europe with many odd facts to 1850 A.D.

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NPBMA Convention

Asheville, N. C. — With approximately 100 delegates in attendance, the Southern division of National Paper Box Mfr's., Ass'n., held a two-day convention here October 7-8.

William Price, of Burlington, was elected chairman of the division, succeeding C. C. Vatter, of Louisville, Ky., who was made national director of the division.

Billy Patterson of Atlanta was elected vice-chairman, and P. L. Reed of Richmond was chosen secretary-treasurer. Elections and installation of officers were held as the final business of the convention.

Chairman Vatter, basing his prediction on committee reports and statements made by individuals representing various sections of the division, said business would be good in the industry through the rest of the year.

"Box manufacturers are working at full capacity now, in spite of a drastic slump at the start of the year," he asserted. "Backlogs of orders are substantial, and that is a good indication that business in general is good.

"Other industries depend on us for packaging of their goods, and since we can say business is good it must speak well for other industries."

American Wax Importers' Election

New York—The American Wax Importers & Refiners Ass'n., Inc., formed one year ago under the presidency of Frank B. Ross, held its annual meeting the last week in September when the following officers and directors were elected for the ensuing year: A. J. Bohart, Stein, Hall & Co., Inc., president; J. L. deLyra, Wessel Duval & Co., Inc., vice-president; J. J. Garvey, Mamaroneck Chemical Corp., secretary; and W. Gantenbein, Distributing & Trading Co., Inc., treasurer. Directors are: L. M. Argueso, M. Argueso & Co., Inc.; A. J. Bohart, Stein, Hall & Co., Inc.; C. S. Bullock, Strahl & Pitsch, Inc.; J. L. deLyra, Wessel Duval & Co., Inc.; and F. B. Ross, Frank B. Ross & Co., Inc.

Reporting on the year's activities, Mr. Ross said that the Association consists of 19 member firms, comprising with but few exceptions, the vegetable wax importers and refiners of the United States. Affiliation with the National Council of American Importers was accomplished early in 1949. The Association's research program on vegetable waxes, being carried out by its Committee on Qualities through use of the laboratory facilities of New York University, made satisfactory progress. It is hoped that resulting data can be compiled and correlated during the first half of 1950. Association headquarters are at 36 West Forty-Fourth street.

Packaging Machinery Institute

Chicago—"The Long Range Outlook for the Packaging Machinery Industry" will be discussed at the 17th Annual Meeting of the Packaging Machinery Mfr's., Institute, at the Edgewater Beach hotel, October 31-November 2. Opportunities for foreign business for packaging machinery manufacturers also will be discussed, John P. Corley, of the Miller Wrapping & Sealing Machine Co., Chicago, who is chairman of the program committee reports.

Change in Meeting Date and Place

Boston—The regional meeting originally scheduled by the American Institute of Chemical Engineers to be held here next June has recently been changed to Swampscott, Mass., and the dates selected are May 28-31. The headquarters hotel will be the New Ocean House.

Radioisotopes Bugaboo Blasted

Chicago—The role radioisotopes can play in paper manufacturing and converting was explained by Louis Mead, Chicago sales manager of Tracerlab, Inc., at the October meeting of the Chicago Section, TAPPI, on October 17.

These isotopes will determine almost instantaneously the mass weight of a certain material, such as paper on the machine, or the weight of one material superimposed upon the other, such as the amount and uniformity of wax upon a sheet of waxed paper, Mr. Mead said. He decried the prevalent fear of working with radioisotopes, arising from the isotopes' association with the atomic bomb in warfare. The amount of injurious rays emanating from radioisotopes used in these thickness-measuring instruments is completely absorbed by approximately eight inches of air so that the personal hazard is negligible, Mr. Mead stated. Furthermore, he pointed out, the Atomic Energy Commission must approve all industrial and experimental uses of radioisotopes and has established extremely rigid safety precautions in their usage.

In addition to Mr. Mead's talk, a sound-color film, "Waxes for Protective Packaging," produced by the Socony-Vacuum Oil Co., Inc., was shown. This film depicted the methods by which waxes are drawn from oil and the various laboratory tests given the waxes before they are approved for industrial use.

Paper Stock Men Meet

New York—The initial Fall season meeting of the New York Assn., of Dealers in Paper Mills' Supplies, Inc., was held at 6:30 p.m., October 4, preceded by a dinner, at Whyte's Restaurant. Morris Kay, of the Wilson Paper Stock Co., Inc., president of the Association, presided.

PHILADELPHIA PAPER & TWINE ASS'N. HOLDS ANNUAL GOLF OUTING

Sidco Pope Co.'s Joseph (Chap) Rafferty's gross of 75 was the low score at the season's final tournament of the Philadelphia Paper & Cordage Ass'n., at St. David's Golf Club, October 4. He becomes the holder for one year of the Beveridge Paper Co., Cup . . . Thirty-five golfers attended the final on a typically beautiful October day and 25 remained for dinner. Howard Satterthwaite of the Garrett-Buchanan Co., chairman, was toastmaster. Joseph A. Purtell of the Atlantic Paper Co., assisted . . . Other winners of the day were: First low net Class A—Mr. Purtell, Buffalo Envelope Co., Cup; second low net Class A—Allison Clough, Gummed Products Co.; first low net Class B—Albert Wagner, Industrial Tape Corp., The Morgan H. Thomas Trophy; second low net Class B—J. T. Gates of Twitchell & Co.; first low net Class C—Frank J. Bushemi of the Garrett Buchanan Co., The W. C. Hamilton & Son Cup; and second low net Class C—Norman A. Fort of the Thomas W. Price Co. . . . Herman Schwartz of the Schwartz Paper Co., was awarded permanent possession of the Jessup & Moore Paper Co., Cup for being honest enough to record the number of strokes he required to get around 18 holes. Howard Satterthwaite won the Kicker's Handicap . . . Ed. note: The Jessup & Moore Paper Co., is no longer in business and some way had to be devised for retiring the trophy permanently. Thus the Schwartz Award . . . Pictured, left to right, are: Mr. Clough; Wayne Goff, guest; John Birle, American Forest Products Co.; Clyde A. Egan, Egan Paper Co.; Mr. Bushemi; Albert Gunther, Denny Tag Co.; Mr. Purtell; Mr. Satterthwaite; John A. Downer of the Stocker Mfg., Co.; John R. Howarth, J. R. Howarth Paper Co.; Herman Boch of the Barger Paper Co.; and William Linderman of the J. R. Howarth Paper Co.

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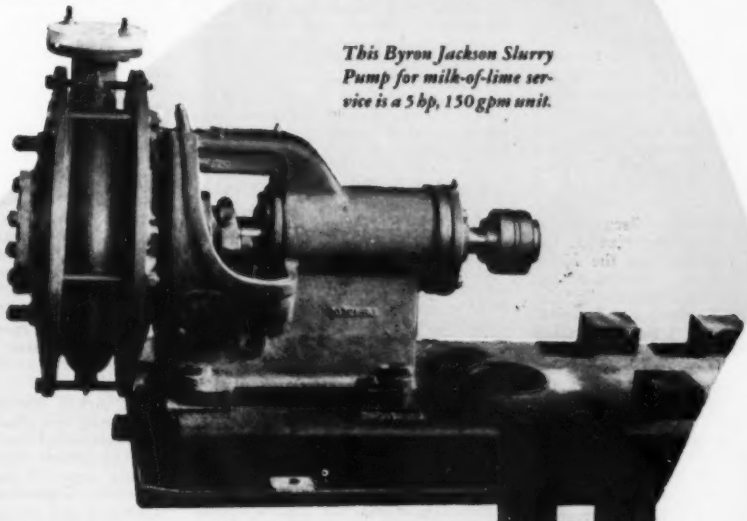

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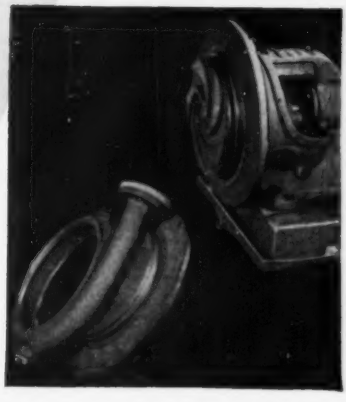

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Plant Maintenance Conference

CLEVELAND — The American Society of Mechanical Engineers and the Society for the Advancement of Management will co-sponsor the conference program on plant maintenance to be held concurrently with the Plant Maintenance Show at the Auditorium, January 16-19, it is reported by Clapp & Poliak, Inc., the exposition management. The Cleveland Engineering Society will be host at a dinner for visitors.

The exposition and conference, first ever devoted exclusively to efficient maintenance of plants, will cover a wide variety of topics of interest to management.

Topics scheduled for discussion include: "Maintenance Organization and Management"; "Budgeting the Maintenance Operation"; "Selection and Upkeep of Lighting Equipment"; "Upkeep of Motors, Controls and Distribution Equipment"; "Using Electrical Instruments in Maintenance"; "Upkeep of Floors, Walls and Roofs"; "Protection, Decoration and Cleaning of Surfaces"; "Sanitation and Housekeeping"; "Lubrication"; "Application of Service Equipment"; "Protecting the Plant"; and "Protecting the Worker."

More than 100 exhibitors will give demonstrations of machinery, materials and methods for reduction of costs in plant maintenance.

Advance registration cards, which will provide admission to both the exhibits and the conference, are obtainable without charge from Clapp & Poliak, Inc., 341 Madison avenue, New York 17. Hotel reservations may be made by writing Plant Maintenance Show Housing Bureau, Terminal Tower, Cleveland, Ohio.

NAWMD Traffic Committee

NEW YORK — A full report of the National Ass'n., of Waste Material Dealers, Inc., Traffic Committee's activities by Harris Goldman, of Harris Goldman Co., Inc., New York, chairman of the group, will be heard at three Divisional meetings of the association November 1-4 and 9-10.

The first, a combined session of the Southeastern and Southern Divisions, will be in the Atlanta Biltmore hotel, Atlanta, on November 1; the second, in the Adolphus hotel, Dallas, November 4, will be for the Southwestern Division; while the Joint Conference of the Pacific Coast Division of NAWMD and the four Pacific Coast chapters of the Institute of Scrap Iron and Steel, Inc., on November 9-10 will be held in the Palace hotel, San Francisco.

The brief prepared by the Traffic Committee is expected to be presented before the area meetings are held. If it is, Mr. Goldman plans to reveal the basis on which relief from high freight rates is being sought.

Members of the committee who have worked with Mr. Goldman and the commodities they represent follow: Miss Shirley Rief, Atlantic By-Products Co., New York, cotton rags; Walter H. Martens, Geo. W. Millar & Co., Inc., New York, paper; Nicholas Larsen, H. Muehlstein & Co., New York, rubber; Robert Moelis, L. & R. Moelis, Brooklyn, N. Y., wool rags; and M. E. Whitehead, Barth Smelting Corp., Newark, N. J., metals. In addition to the above, the committee has utilized the counsel of traffic managers of firms in the industry from throughout the U. S. The Traffic Committee was named in 1948 by the then president, Sidney Danziger.

Printers-Technical Sec., CPPA Meet

OTTAWA — The Ottawa Club of Printing House Craftsmen and the Ottawa Valley Branch, Technical Section, CPPA, held a joint meeting and dinner here, followed by trips to the mills of the E. B. Eddy Co., where different stages of the manufacturing of pulp and paper products were observed. Dr. E. F. Foote, mill manager of the company, addressed the gathering before the visit. Murray Lyne, chairman of the paper makers, occupied the chair. J. H. Cowan, president of the paper craftsmen, assisted.

"Utilization of Wood Waste" Meeting

DURHAM, N. C. — The Virginia-Carolina section of the Forest Products Research Society will hold a meeting at Duke University on November 4, open to all persons interested in wood research, development, production and utilization. Theme of the meeting will be "Utilization of Wood Waste."

Fall Meeting of BPTA, Nov. 16

BOSTON — The Fall meeting of the Boston Paper Trade Association will be held November 16 at the Somerset hotel.

CONVERTERS

Third Am. Can Co., Baltimore Plant

NEW YORK—American Can Co., has purchased a 43-acre tract on the southwest limits of Baltimore from the B. & O. R.R., as the site for a paper milk container plant. Its Maryland and Miller plants in that city currently manufacture cans for packers of food and non-food products.

President C. H. Black said the new plant, which is scheduled to be completed within a year, will employ about 250 persons. It will have approximately 150,000 square feet of floor space at the start, with provision for expansion. The plant will serve the firm's Atlantic division which extends from New England to the Gulf Coast. Demand for the containers which the company developed and introduced just before the war has taxed existing facilities and limited the supplying of these containers mainly to large metropolitan areas, Mr. Black said.

Ten Billionth Paper Bag

CANAJOHARIE, N. Y. — The "ten-billionth" paper bag manufactured by the Arkell & Smiths Co., was formally displayed at the open house ceremonies marking the firm's 90th anniversary on October 7.

William Dittman, oldest employe of the firm, presented the bag to the president, Sheldon S. Yates. Mr. Yates announced the company will present some of the original patents of James Arkell to the Canajoharie public library for permanent preservation. The library itself was given to the village a number of year ago by the children of Mr. Arkell, in his memory.

James Arkell, father of the late Bartlett Arkell who was president of the Beech-Nut Packing Co., for many years, started the paper bag industry as a pioneer, after having earlier manufactured cloth bags.

The firm of Arkell & Smiths formed in 1859, was incorporated in 1884. The oldest bag business in the country, it now has plants at Wellsburg, W. Va., and Mobile, Ala.

Mr. Arkell invented machines for the making and printing of paper bags which embodied the basic features for later equipment and for most of the modern types of machines. He continued his improvements in bags and machinery and was granted 32 patents.

Music for the anniversary celebration was provided by the Canajoharie high school band. Following the concert, the VFW drum corps of Fort Plain played.

Timer Chippewa Paper V.P.-S.M.

CHICAGO — Chippewa Paper Products, Inc., has elected Jules E. Timer vice-president and sales manager. For the past year, Mr. Timer has been Chippewa sales manager. A veteran of World War I, during World War II he was a consultant on Army and Navy packaging projects, both in development and educational work. He is a member of the National Federation of Sales Executives, Sales Executives Club of New York City, Paper & Twine Ass'n., and Society of Industrial Packaging & Materials Handling Engineers. An aviation enthusiast, he has flown more than 1,000,000 miles during the past 30 years.

Sussenberger Succeeds Lynch at Nep.

HYDE PARK, Mass.—John P. Tonello, president of the New England Paper Box Co., reports that Wm. F. Lynch has resigned and that the duties formerly assigned to Mr. Lynch have been assumed by Frederick Sussenberger, treasurer. The sales department remains under the direction of Geo. A. Tierney and the fabricating department continues with Guido Toledo in charge.

Forming Louisiana Corporation

BATON ROUGE, La. — The American Carbon Paper Mfg., Co., Ennis, Texas, has filed articles of incorporation in Louisiana.

Arkell & Smiths Co. 90th Anniversary

CHICKASAW, ALA.—The Arkell & Smiths Co., will celebrate its 90th anniversary on October 21. The company was established in 1859 in Canajoharie, N. Y., and is a comparative newcomer to this area. The modern plant in Chickasaw was opened in January, 1948.

Several of the company's officials will come to Mobile to take part in the celebration. Among them will be: S. S. Yates, president and chairman of the board; Roger P. Smith, vice-president; and William C. Arknell, director of the company and president of the Beech-Nut Packing Co. These officials are grandsons of the founders.

Open house is planned for October 21, which over 1,500 visitors are expected to attend. Guests will be conducted through the plant.

Arrangements have been made for over 600 school children to visit the plant while it is in operation. They will be conducted through the plant in small groups.

The local plant is managed by Robert E. Serle, who came here from the Canajoharie plant in October, 1948.

The celebration will be topped off with a banquet at the Grand Hotel.

Western Paper Products Co. Expands

SALT LAKE CITY—Landon M. Persons, general manager, has been named vice-president and elected to the board of directors of the Western Paper Products Co. The firm has plans for a 20,000 square foot addition to its plant, which now contains 60,000 square feet. Scott & Beecher are the architects. The addition will house a new central office and production space for fabrication of corrugated shipping containers, set-up and folding cartons. Mr. Persons was previously in the production and sales department of the Central Fiber Products Co., plant in Denver. Central Paper acquired control of the 50-year-old Utah firm about three years ago.

Sealright's Mrs. Farnham Featured

OSWEGO, N. Y.—Mrs. Marie Wallace Farnham, internal sales supervisor of the Sealright Co., who is an active member of the Oswego Business and Professional Women's Club, was the subject on October 12 of a feature story in the Oswego *Palladium-Times* in connection with observance of National Business Women's Week.

Sherman Ups Herrick

NEWTON UPPER FALLS, Mass.—John Herrick has been promoted from sales manager of the specialties division to general sales manager of Sherman Paper Products Corp.

Dixie Housewarms Brampton Plant

BRAMPTON, Ont. — Dixie Cup Co., (Canada), Ltd., held a "family day" open house at its new plant here on October 7. Several thousand guests made a tour of the recently-completed plant, were served "Ice Cream Dixies and light refreshments in the company cafeteria, and received sample packages of Dixie Cups as souvenirs of their visit.

Cecil F. Dawson, president, and A. R. Lillicrapp, vice-president and treasurer, spoke to the guests at 8:45 P.M. over a loud speaker system installed throughout the plant, and their addresses were broadcast over radio station CHUM.

CELEBRATING THIRTIETH ANNIVERSARY

R. G. Hawthorn, chairman of the Minerva Wax Paper Co., Minerva, Ohio, cuts 30th Anniversary cake as the firm celebrates its founding in 1919. . . . With Mr. Hawthorn, from left to right, are: L. R. Croop, assistant secretary; R. C. McCaskey, vice-president in charge of sales; James O. Spencer, director; A. F. Gluck, president-general manager; Mrs. Hazel Dumbleton, assistant treasurer; and Arthur Bluck, treasurer. . . . The occasion was marked by a birthday party at which all of the employees were the guests of the company executives. . . . Mr. Gluck, and Mrs. Mitchell of the Employees Ass'n., were the principal speakers at the celebration.

CECIL P. DAWSON

The new plant is of structural steel and brick construction, designed specifically for the manufacture of paper cups and containers. It is a one-story building 182 feet wide and 284 feet long, and has floor space of over 50,000 square feet for offices, manufacturing, and warehousing. All walls are of brick, with exterior brick of light cream.

The building is well insulated and has heat and glare-resisting glass installed throughout. Automatic sprinklers protect the entire plant. Fluorescent lights are installed throughout for adequate lighting, and are recessed in the office areas. Heat is supplied by unit heaters in the manufacturing area, and by finned pipe coils located below the windows in the offices, where a warm air ventilating system provides a steady, uniform heating.

Attractive and clean locker rooms are provided for employes with ample washing facilities and steel lockers for each employe.

Architect and industrial engineer for the plant was N. A. Armstrong, Toronto. The contractors were Milne & Nicholls, Ltd., Toronto.

Greeting Card Group Exec. Comm.

NEW YORK—Sam Jaffe of Wallace Brown, Inc., has been elected to the executive committee of the National Ass'n., of Greeting Card Publishers. Others named to the association's new executive committee are: Sidney C. Burgoyne of Sidney J. Burgoyne & Sons, Philadelphia; W. W. Christopher of Rust Craft Publishers, Boston; Thomas Doran of Thos. Doran Card Co., White Plains; Arthur A. Gelatt of General Card Co., Chicago; J. C. Hall of Hall Brothers, Inc., Kansas City; M. O. Lawson of Whitman Publishing Co., Racine, Wis.; Allen Markoff of the Paramount Line, Providence; Harry M. Messenger of the Messenger Corp., Auburn, Ind.; Frank Moore of Sterling Greetings, Inc., Chicago; and Harry M. Rose, Jr., of the Rose Co., Philadelphia.

25 Yrs. No Lost Time Accidents

NIAGARA FALLS, N. Y.—The Niagara Wall Paper Co. reported an unusual safety record covering the last quarter of a century. During the past 25 years, 7,500,000 man-hour exposure has been experienced at the plant without one lost-time accident. During 1949 the 164 employes of the firm have been exposed 219,000 man hours without a lost-time accident. Trophies have been awarded the company by the National Safety Council, Associated Industries of New York State and Niagara Falls Chamber of Commerce.

Chippewa Adds Bishop to Staff

CHICAGO—Chippewa Paper Products Co., Inc., has named Charles H. Bishop as technical service representative. Mr. Bishop will concentrate his efforts on helping to solve packaging problems for manufacturers and shippers in Illinois, Iowa, Minnesota, Wisconsin, Michigan and Indiana.

Somerville Expansion Planned

WINDSOR, Ont.—Somerville, Ltd., is considering building an extension to its plant to manufacture boxes and cartons.

Kraft Containers, Ltd., Expanding

HAMILTON, Ont. — Kraft Container, Ltd., is planning a plant addition to manufacture paper boxes.

MERCHANTS . . . .

Altman Brothers Launch Firm

SPRINGFIELD, Mass. — William L. Altman and Bernard S. Altman have entered the paper and twine business under the name of Altman Bros. Paper Co., Inc., at 17 Patton street. They were formerly employed by the Royal Paper Co., of Holyoke for 12 and nine years respectively.

Railey Paper Co. Incorporated

AUSTIN, Texas — Railey Paper Co., merchandise, has incorporated with authorized capital stock of $25,000. Incorporators are Mrs. E. R. Harrell, George R. Haberlin and Tabb Harrell.

Merchant Sales Volume Holding Well

CINCINNATI — "In recent visits to various local markets, there is every indication that sales volume at the merchant level is holding up very well and every promise that it will continue on this level until mid December," John L. Richey, secretary-treasurer of the Paper & Twine Ass'n., reports. "Mill prices seem to be firm and the mills are taking substantially longer to make deliveries, partially as the result of greatly increased orders since August to fill up merchant and converter inventories which had been allowed to drop to a low level," he added.

"Give" One Day's Pay

DALLAS, Texas—Clampitt Paper Co., employes each "gave" one day's pay to the Community Chest campaign in that city. Clampitt was one of four firms in the industrial division of the campaign which followed this procedure, the Dallas *News* reports.

Acme Planning New Home

MEMPHIS, Tenn.—The Acme Paper Co., Inc., headed by Leo C. Wurtzburger, will move to a new location in the "Robinson Industrial Artery of Memphis" at South Bellevue and Orgill, when a new building is completed for the firm.

Williamsport Paper Co. Expanding

WILLIAMSPORT, Pa. — Williamsport Paper Co., expects to erect a new one-story warehouse at Rose Street and Vine Avenue in the near future, John A. Gerber, company president, reports.

Railey Co. Disincorporates

AUSTIN, Texas—Dissolution of incorporation has been granted the Railey Paper Co.

Zellerbach Sells Salt Lake Building

SALT LAKE CITY—Zellerbach Paper Co. has sold to the Mutual Life Insurance Co. of New York, its new one-story steel and concrete distribution plant and office at 2255 Third East street, Bruce C. Garrison, manager of the Salt Lake City division of the paper firm, and Henry Verdelin, vice-president and manager of real estate for the insurance company report. The property has been leased back to the seller for a long term.

Dillard Greenville Sales Meeting

GREENVILLE, S. C.—Between 50 and 60 salesmen and executives attended a general sales meeting of the Dillard Paper Co., which has six branches in the Carolinas and Virginia, held at the Poinsett hotel here, October 14-15. It was the first such meeting ever held outside Greensboro, N. C., the home office of the company. Among those attending were Stark S. Dillard, chairman of the board, and R. E. Morrissett, president of the company.

Wholesalers' Sales, August

WASHINGTON — Wholesale business of paper and products distributors was estimated at $120,000,000, seasonally unadjusted, in August, compared with $90,000,000 in July, by Commerce Department this week.

Dillard Building Warehouse

CHARLOTTE, N. C. — The Dillard Paper Co., is building a warehouse at 1516 North Tryon street. It will cost $57,192.

MISCELLANY . . . .

Marvellum Ups Fay and Lajoie

HOLYOKE, Mass. — Richard S. Fay has been named to succeed Russell S. Bracewell as production manager at the Marvellum Co., here, and Lawrence V. Lajoie has been appointed to the newly-created post of assistant production manager. Mr. Fay has served 26 years with the Marvellum Co., and was manager of the cover

Wholesale Paper Merchants Inventories As At 10/1/49

(In Number of Days Sales)
Source: Paper & Twine Ass'n.

MARKET	Kraft Wrap	Butchers	Groc. Bags	Gum. Tape	Ind. Towels	Wrap Tissue	Toilet Paper
Illinois	45	60	50	60	40	60	60
"	60	90	20	10	30	30	40
"	45		60	30	45	45	45
"	30		30	30	30	30	30
"	30	60	15	15	90	30	60
Indiana	40	30	30	60	120	60	90
"	60	45	30	30	45	30	45
"	30	45	30	30	15	90	30
Iowa	45	30	45	10	40	30	45
Michigan	40	30	45	30	45	60	45
Ohio	45	60	60	90	60	120	75
"	45	30	30	60	60	30	30
"	30	25	30	40	25	30	40
"	30	20	30	45	30	60	40
Wisconsin	70	60	45	45	45	50	45
"	70	70	45	65	70	70	45
"	60	60	60	30	30		60
"	60	30	60	30	30	15	30
"	50	37	45	35	30	60	30
"	30	40	45	30	21		21
"	60	30	10	30	10	10	5
"	90	90	90	30	30		30

division before his promotion. Mr. Lajoie, formerly in charge of maintenance at the plant, has been with the company 21 years.

The two sales divisions of the Marvellum Co., the Cover and Specialties Division and the Packaging Division, have been merged and sales for both departments will be directed by Robert C. Adams, formerly manager of the packaging division, assisted by George B. Gunderson, Whiting S. Houston, Frederick O. Hutchins and Alvin D. Jenkins.

Can.-U. K. Outloook Improving

By M. L. SCHWARTZ

OTTAWA—In sharp contrast to earlier reports that the pulp and paper industry would suffer adverse effects, if not entire elimination, in the United Kingdom market within a relatively short time, probably in 1950 or 1951 as a result of Britain's dollar-saving program, there is a growing belief here that something may be forthcoming shortly to indicate such Canadian sales in that market are not facing as black a future as appeared likely only a few weeks ago.

As far as the pulp and paper industry's trade in the United Kingdom is concerned, it is understood that complete elimination of such Canadian products in that overseas market by next year may not occur as indicated earlier because the overall purchases of Britain in Canada in the 12-month period starting July 1, 1949, will be approximately $660 millions as compared with $690 millions spent in the calendar year 1948. In other words, there would be not much less spent by Britain in the coming months than in the preceding year.

Further, the United Kingdom Government is eager to sell as much as possible in the Canadian market in 1950 and in the coming months in order to get Canadian dollars. Thus, it is presumed a sudden and complete "blackout" of trade for the Canadian pulp and paper industry may react unfavorably against British sales in Canada, this being taken as a hint that strong representations are likely to be made if the United Kingdom embarked on such a sudden, restrictive trade action. Only a short few days ago, a spokesman for the Canadian Government told the House of Commons here that "the strongest possible representations have been made to the authorities in the United Kingdom as to the desirability of continuing the purchase of newsprint in Canada."

"British members of the United Kingdom-Canada Continuing Committee on Trade have just left Canada," said this spokesman. "While they were here, we placed the situation before them as strongly as we could. While we appreciate the right of the Government of the United Kingdom to spend their dollars as they think best, we are hopeful that the trade in newsprint that has been going on for many years will continue under the present situation."

This statement is interpreted as indicating that the Canadian Government has put the case of the pulp and paper industry's trade in the United Kingdom market before the authorities overseas in no uncertain way and there is a definite hope that such trade may not be affected adversely to the same extent as earlier reports had suggested. At least, something appears to be in the making to allow Canada's pulp and paper industry to retain the British market, even if this means some price or volume adjustments, though there is nothing official or certain on this qualification.

Defeat Hydro Program—Huntress

NORWICH, Conn.—Carroll B. Huntress, chairman of the National St. Lawrence Project Conference on October 19 called on paper manufacturers for defeat of the federal government's waterpower program for New England, urging that the government reduce its expenditures rather than look for "more ways to spend it."

He said tentative plans of government agencies call for four hydroelectric plants in Connecticut. One would be located at Enfield Rapids on the Connecticut in connection with the proposed Hartford to Holyoke navigation project, already supported by paper mill officials. The other three, he said, would be on the Housatonic River at Kent Furnace, Boardman and Shepaug.

In addition, Mr. Huntress said, legislation is pending in Congress for more Army engineer and Federal Power Commission surveys of New England "to thus extend the groundwork for federal government." He said the plan of the federal government "is to grab these rivers and to impose Washington's bureaucratic regime on the development of this region—with federal subsidy offered as bait for the trap."

Huntress quoted the FPC as having said the proposed St. Lawrence seaway and power development would provide New England with a relatively small amount of hydroelectric power and that the effect on the region's overall power costs would be "negligible."

Seaway proponents have admitted, Mr. Huntress said, that the navigation phase of the proposed international waterway "might adversely affect" New England, "but they brush aside the threat by emphasis on alleged benefits from the power development."

Dumping Prohibited

TORONTO—Pulp and paper companies in Canada must refrain from dumping untreated waste materials into rivers and lakes, according to a judgment handed down by the supreme court of Canada on October 4. The court gave the Kalamazoo Vegetable Parchment Co., of Espanola, Ont., six months to stop polluting the Spanish River, upon which the $13,000,000 plant was erected and which provides the chief asset for a number of operators of tourist resorts below Espanola.

K. V. P. Co. had appealed from an injunction issued by a lower court, restraining it from depositing waste materials from its pulp and paper plant into the Spanish River, the judgment dismissed the appeal with costs.

Action was brought against the company more than a year ago by several owners of land bordering on the stretches of the river below Espanola. They claimed the company had, since opening the plant in May, 1946, polluted the river by discharging poisonous substances from its mill.

Chief Justice J. C. McRuer of the Ontario high court granted the land owners damages and issued an injunction restraining the company from depositing into the river any waste substances which altered the quality of the water.

The mill is the only industry in Espanola and the company claimed that its continued operation was "essential to the economic existence not only of the town but of the whole adjacent area."

The company said it had invested a total of more than 13 million dollars in the plant, employed approximately 1,500 persons and had monthly payrolls of some $450,000.

Waste Paper Demand Resuming

MOBILE — The Mobile Paper Mill Co., is one of a half dozen in the South which uses scrap paper in its manufacturing process. Karl R. Karlson, vice-president of the local firm, said demand first began to exceed the supply of scrap at Chicago. Now the shortage has spread to other markets. "I believe the shortage was created by users who put off buying too long, hoping scrap prices would hit rock bottom," he added.

Drouth Threatens Northern Ontario

OTTAWA—As a result of the Spanish River in Ontario being below normal level, a definite power shortage threat is foreseen in northern Ontario about 35 miles west of Sudbury, curtailing wood pulp production in the region unless rainfall is far above normal between now and the freeze-up, according to paper company officials in the area.

Papetry Exhibit

WASHINGTON — Stationery, ranging from 50 cents to five dollars per box, all from American manufacturers, is being currently featured in an exhibit of papetry in the main lobby of the Commerce Department.

Building Log Handling Facilities

PORT NEVILLE, B. C.—Western Logging Co., Ltd., plans to construct a log booming ground, approaches and dump, in Port Neville off Johnstone Strait on Lot 1991, Range 1, Coast District, B.C.

Expanded Programs Authorized

WASHINGTON—Approval October 11, by the President of Senate Joint Resolution 53, now known as the Anderson-Mansfield Act, opens the way for an accelerated program of reforestation and revegetation of forest and range lands in the National Forests, the Forest Service, U. S. Department of Agriculture, said on October 12.

The Act declares it to be the policy of Congress to accelerate and provide a continuing basis for needed reforestation and revegetation of national forest lands and other lands under administration of the Forest Service. A 15-year program is contemplated, with appropriations for reforestation authorized in progressively increasing amounts, ranging from $3,000,000 for fiscal year 1951 to $10,000,000 for fiscal year 1955 and a like amount each year thereafter through the fiscal year 1965. For range revegetation, appropriations are authorized beginning with $1,500,000 for fiscal year 1951 and increasing gradually each year until $3,000,000 is authorized for the fiscal years 1955 through 1965.

S. J. Resolution 53 was introduced in the Senate by Senator Clinton P. Anderson of New Mexico. An identical measure was introduced in the House by Rep. Mike Mansfield of Montana.

Some four million acres of potentially productive timberland within the National Forests,, now denuded or unsatisfactorily stocked, will be reforested as rapidly as funds are appropriated, the Forest Service said. The program now authorized should eventually be self-liquidating through increased timber values and livestock production, the Forest Service said.

Patman Levels His Lance

WASHINGTON — The House Small Business Committee on October 17 was looking into complaints from small newspapers about the cost of newsprint. Disclosing this, Chairman Wright Patman said: "We have had a substantial number of complaints, and we are looking into them to see whether a full investigation by the committee is called for." He added that approximately 90 percent of the 2,000 daily and 10,000 weekly newspapers are classed as small business.

Midget Mill, Exposition Attraction

MILWAUKEE — A miniature paper machine owned by the Franklin Institute, Philadelphia, was demonstrated in action by William H. Sexton to visitors attending the Wisconsin Outdoor Exposition here in mid-September. Twenty-two feet long and about nine feet wide, the machine transformed pulp to paper in about six minutes.

3d FRD Downward Trend Halted

PHILADELPHIA — The downtrend in business activity has been halted, at least temporarily, in the Third Federal Reserve District, according to the District's *Business Review*, published October 19. Covering August activities, figures for paper manufacturing in this Pennsylvania District showed the following:

Output two percent below July and 15 percent below August, 1948. The August, 1949, index of employment was 110, down three percent from the previous month, and seven percent below August a year ago. Payroll index stood at 247, down two percent from the previous month, and eight percent under a year ago. (The index is to be compared to 100, which was the 1939 average). Average weekly earnings were $48.43, a drop of one percent from a year ago, and average hourly earnings were $1.204, a boost of seven percent over one year ago. The figures applied to production workers only.

SUPPLIERS . . . . .

Abbe Engineering Co., of New York, manufacturer of pebble, ball and tube mills, mixers, dispensers and sifters, has acquired the plant, equipment, designs and goodwill of the Kent Mill Co., Inc., Brooklyn, N. Y., manufacturer of Kent-Maxecon pulverizing mills and Kent filter air separators. The Kent Mill Division of the Abbe Engineering Co., will take over all the activities of the former company. Correspondence with regard to new equipment, repair parts and accessories should be addressed to the new Division, 50 Church street, New York 7, N. Y.

Babcock & Wilcox Tube Co., Beaver Falls, Pa., on October 25 reported issuance of price sheets for plain end random length, seamless, carbon steel merchant pipe. The price sheets cover both Grade A and Grade B seamless pipe in nominal pipe sizes one and one-half inches and under, in standard weight (Schedule 40), extra heavy weight (Schedule 80), and double extra heavy weight.

Corn Products Refining Co's., new Corpus Christi, Texas, plant which processes milo maize into starches, dextrose, sugars, oil, high protein cattle feeds and similar products is the first "wet milling" grain plant to employ a process that replaces the stone buhr mill, used by millers since the days of the pyramids. The principal significant feature of this plant, designed and constructed by the *H. K. Ferguson Co.*, is its functional design. The Corn Products Refining Co., engineering department collaborated in the process design. This plant is especially significant in that it is one of the first chemical plants to achieve complete integration of process and buildings. One of its principal products is starch (330,000 pounds per day), which has wide application in the paper industry.

SULCER, GRAVER G. M.

—named general manager of Graver Water Conditioning by E. N. Gosselin, president of the Graver Tank & Mfg. Co., Inc. Aiding Mr. Sulcer as assistant general manager is Edward W. Welp.

HOHMAN AND KYLE

Shartle Brothers Machine Co., Middletown, Ohio, has named R. W. Hohman (left) sales representative in the Virginia area and C. W. Kyle (right) representative of the Shartle Division of Black-Clawson in the Ohio-Michigan area. Mr. Hohman has represented the Black-Clawson, Shartle, Dilts organization in New York, New Jersey, Pennsylvania, and Delaware area for the past four years and has been associated with the Shartle Division for the past 12 years . . . Mr. Kyle, prior to his transfer to the Ohio-Michigan area represented the Black-Clawson, Shartle, Dilts organization in the New England area for four years.

J. B. Rutter, vice-president of the Monsanto Chemical Co., and general manager of its Merrimac Division, will retire effective November 1 to devote full time to service as an industrial consultant. He has been retained by the company in the latter capacity. Mr. Rutter plans to open offices in Boston after January 1.

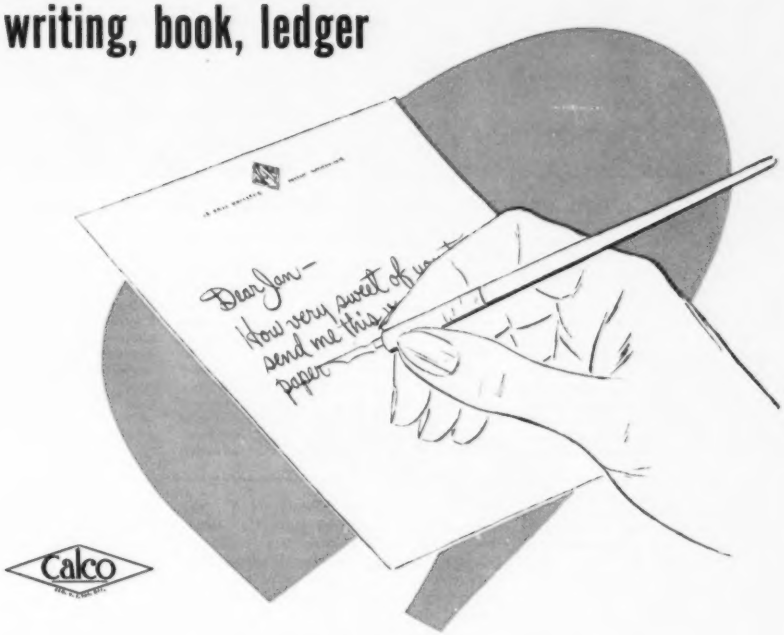
Goulds Pumps, Inc., Seneca Falls, N. Y., has added Stainless Steel pumps to its line. The new pumps are engineered for the handling of corrosive liquids. They are available in eight sizes, with capacities up to 750 GPM and heads up to 180 feet, depending on capacity.

Hercules Powder Co., has named Dr. Richard S. George assistant director of the company's experiment station at Wilmington, Del. He was formerly manager of the naval stores research division.

B. F. Goodrich Rubber Co., of Canada, Ltd., has added belting and hose to its industrial rubber products being sold to the pulp and paper industry through Clement King & Co., Montreal.

Testing Machines, Inc., New York City, has been named eastern distributor for the Cleveland Impact Recorder manufactured by Cleveland Impact Recorder, Inc., Cleveland.

for superior whiteness in bond, writing, book, ledger



HELMERCO BLUE

Wherever superior whiteness is required, in bond, writing, book and ledger, paper manufacturers have come to depend on HELMERCO BLUE to supply it. They find it has good working properties in the beater, and offers excellent light fastness. It also produces fine light blues in these same papers.

In the tinting of paper coatings, HELMERCO BLUES produce an excellent high white shade in any formula.

HELMERCO BLUES are available in a range of shades from red to green: M4R Conc., M2RW Conc., MGW Conc., MG Conc., M2GB Conc., M2G Conc., M4G Conc., and M5G.

Let your Calco representative help you with any problems related to the coloring of paper.

AMERICAN *Cyanamid* COMPANY

CALCO CHEMICAL DIVISION,
Bound Brook, New Jersey

New York · Chicago · Boston · Philadelphia · Charlotte · Providence

WYANDOTTE MEETING FEATURES BETTER CUSTOMER SERVICE, BETTER SELLING

The Wyandotte Chemicals Corp., Michigan Alkali Division sales meeting at St. Clair, Mich., the week of October 3, featured "Better Customer Service" and "Better Selling." Those in attendance were, first row left to right: G. M. Dunning, director of Eastern sales; W. L. Settlemire, calcium chloride; M. A. Thompson, manager, Chicago office; P. F. Wagner, sales; J. C. Mills, Chicago; R. K. Rigger, acting manager export department; Bert Cremers, vice-president, Michigan Alkali Division . . . Second row: J. E. Dale, New York; S. B. Scott, manager, New York office; C. J. Farcasin, Cincinnati; T. C. Simpson, Chicago; M. E. Clark, sales manager, soda ash, caustic, bicarb; R. L. Fosburg, calcium chloride; J. H. Bahlburg, Jr., New York; V. H. Vodra, assistant sales manager, calcium carbonate . . . Third row: R. D. Weed, Cincinnati; R. W. Moister, New York; T. R. Boyle, manager, sales records; E. Heiser, manager, Cincinnati office; L. C. Reid, assistant sales manager, organic chemicals; R. W. Hagemeyer, sales; C. J. Diehl, technical service; H. C. Brunner, manager, Detroit office; W. S. Nevius, director, traffic . . . Last two rows: P. G. Fuger, manager, St. Louis office; R. Raine, director, advertising; H. S. Shultz, technical service; C. S. Johnson, director, technical service; R. C. Leonard, Detroit; P. M. Bigley, assistant to vice-president, Michigan Alkali Division; F. R. Sproule, assistant sales manager, calcium chloride and public business; F. W. Sweany, calcium chloride; P. E. Burchfield, assistant director, technical service; L. D. Dodson, manager, calcium chloride and public business; P. L. Weller, director, market research; J. A. Sheehan, Chicago; L. B. Hawkins, St. Louis; H. F. Roderick, manager, calcium carbonate, chlorine, organic chemicals.

Allis-Chalmers Mfg. Co., Max L. Murdock, who was acting manager of the centrifugal pump department at the Norwood (Ohio) Works, manager of the department succeeding H. C. Gaton, retired. Woodrow Brixius, formerly application engineer in the company's West Allis Works centrifugal pump department, has been named assistant to Mr. Murdock, and Paul B. Hugenberg has been appointed application engineer in charge of sales and orders.

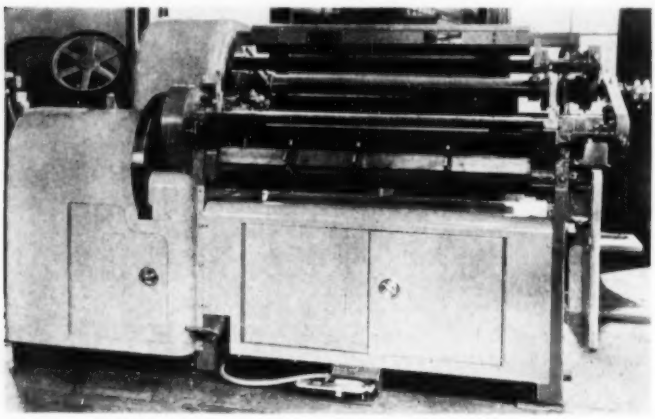
Albany Felt Co., Albany, N. Y., has elected Vice-President John C. Standish to the board of directors to fill the vacancy created by the death of the late Frank D. Cowdery, who was also secretary. A. C. Cramer has been elected secretary.

N. R. Gotthoffer, chemical consultant, has opened offices at 5819 Kinoll avenue, Cincinnati. A graduate of Cornell University, he was research administrator of the Drackett Co., and for 19 years was research and technical director of the Grayslake Gelatin Co. Mr. Gotthoffer serves the paper industry, specializing in the treatment of water and industrial wastes.

General Electric Co., Schenectady, N. Y., is offering "Sittin' and Savin'," a color-sound slide film showing how the average capacitor installation results in a 30 to 60 percent investment return on every dollar spent. Prints are available and showings may be arranged through G-E sales engineers or G-E district offices throughout the country.

Hooker Electrochemical Co., Niagara Falls, N. Y., has named Harris C. Miller to the sales staff of the New York City sales area with headquarters at 60 East 42nd street. Mr. Miller has been with Hooker since 1941.

Leeds & Northrup Co., Philadelphia, observed its 70th anniversary with an open house celebration for employes, their families and friends on Industry Day of Pennsylvania Week, Oct. 22.



CAMERON'S NEW TYPE 40-IDF CAMACHINE

New "Camachine," Type 40-IDF, built by Cameron Machine Co., Brooklyn, N. Y. . . . The machine was designed for converting short length rolls in the paper, textile and rubber industries . . . Capable of speeds up to 600 f.p.m., the machine is equipped with an electrically operated riding roll lift . . . Completely enclosed for safety, the space beneath the machine is utilized as a storage cabinet for tools and equipment.

DOW ADVANCES GUNN

Floyd J. Gunn has been named head of coatings sales of the plastics division of the Dow Chemical Co., Midland, Mich. He joined the firm in 1939.

Yes! It's a fact!

save-alls made of MONEL last longer; need less maintenance

A white-water tray, fabricated of #35 Monel sheet, 16 gauge. The tray measures 21¼ in. wide by 166 in. long. It was made by Brown-Hutchinson Iron Works, Detroit, Mich. for the Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich.

* * *

Bottom view of tray. The welded joints are as corrosion-resistant as Monel itself.

Your save-alls can be a source of trouble and needless expense unless – 1) they're rustproof 2) corrosion-resistant 3) easy to clean.

And when you demand these three virtues of your save-alls, you're demanding an enduring *modern* metal ... MONEL*.

This high nickel-copper Inco alloy is 100% rustproof, highly resistant to paper mill chemicals, and easy to clean (hosing down with water is usually sufficient). Because of these important characteristics, save-alls of MONEL have lasted *as long as sixteen years*... and are still in good condition!

MONEL has an equally fine service record in many other important papermaking applications as well ... stock troughs, stock lines and receivers, flow box linings, slice blades, size press troughs, measuring tanks, doctor blades, screen cloth, winding wire, pump shafts, valves, piping.

In addition to its valuable chemical properties, MONEL has excellent mechanical properties. It is stronger than structural steel, ductile, readily machinable. It can be soldered, brazed, and welded. Welds in MONEL are as strong and corrosion-resistant as the alloy itself. These qualities simplify fabrication problems; help keep initial costs down.

Take the first step towards ending expensive rust and corrosion damage by writing for your free copy of *Monel, Nickel, and Inconel in Pulp and Paper Mills.* Remember, too, that Inco's Technical Service Department is always ready to help you with special problems concerning corrosion, metal-selection, and fabrication.

*Reg. U. S. Pat. Off.

MONEL*...
for minimum maintenance

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INCO
TRADE MARK

THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street, New York 5, N. Y.

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Another good reason why
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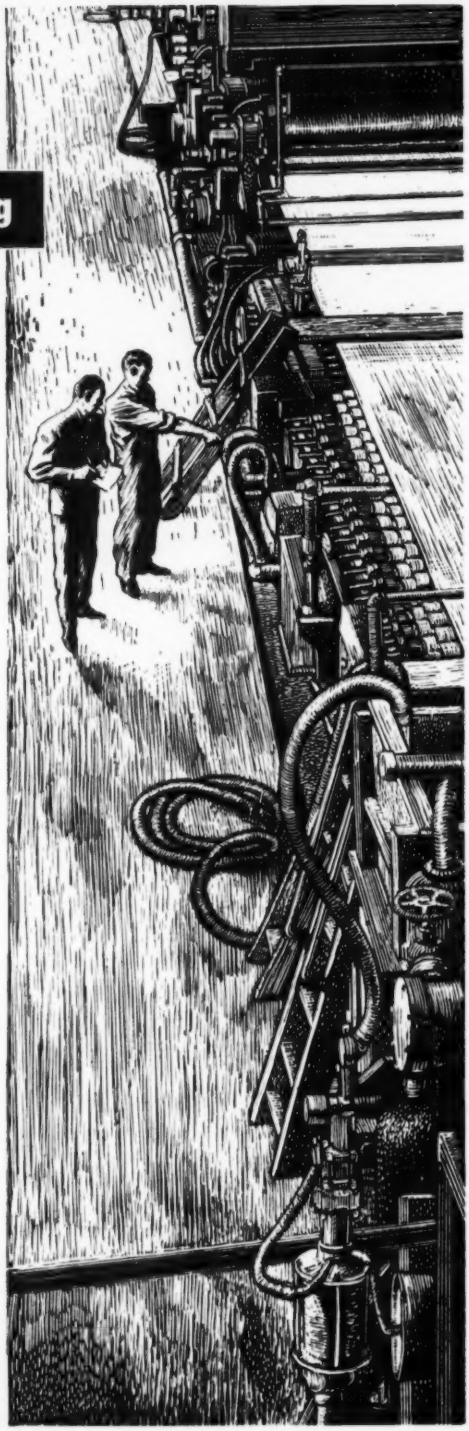

APPLETON WIRE WORKS, INC.
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Utilization of Waste Sulphite Liquor in Concrete

By

E. W. SCRIPTURE, Jr.

Vice President in Charge of Research, The Master Builders Co., Cleveland, Ohio

Abstract

Calcium lignosulphonate derived from waste sulphite liquor is a specific dispersing agent for cement. Studies have been made of various physical-chemical properties of this compound in view of the influences these might have on cement dispersion. Purity is of importance as the sugar content of normal liquor adversely affects cement hydration. An almost ideal composition is secured in the fermentation process for the production of alcohol from waste sulphite liquor. Data are presented to show the improvements in such concrete properties as workability, strength, watertightness, and durability through the use of calcium lignosulphonate.

Introduction

There is little need to point out the desirability of finding means for utilizing waste sulphite liquor. A great deal of work has been done on this subject and many different applications of the solids in the liquor, either in their original form or in a modified form, have been developed. These include such applications (1) as the use of the solids as fuel, use in plastics, production of vanillin, for core binders in foundries, in tanning, as adhesives, as fertilizers, and for road treatment. While many of these applications have been more or less successful, they have suffered from the disadvantages either that the processing required before the material could be utilized was as costly or more costly than the value of the material, in many cases, or that only limited quantities of waste sulphite liquor, compared with the available supply, could be used in any of these applications, or in fact all of them together. Utilization of waste sulphite liquor as a dispersing agent for cement in portland cement concrete is another outlet that will consume substantial quantities but can never be expected to take anything like the total output of waste sulphite liquor.

Dispersing agents have long been known and widely utilized in a variety of industries. Dispersing agents are specific in their action and those applicable to one solid-liquid system may or may not be applicable to any other. As far as portland cement is concerned the problem is complicated by the necessity that any dispersing agent to be used with it must not interfere with the hydration reactions of the cement. Until recent years no dispersing agents have been known which were applicable to the deflocculation of cement and, in fact, the benefits to be derived by dispersing the cement had not been recognized. The active component of waste sulphite liquor, calcium lignosulphonate, either as contained in the unmodified waste sulphite liquor or more or less purified has been employed to a limited extent as a deflocculating or dispersing agent for clay slips, dyes, and possibly in certain other applications. It was found that calcium lignosulphonate is a specific dispersing agent for a suspension of portland cement in water.

Nature of Calcium Lignosulphonate From Waste Sulphite Liquor

Our work has not been directed primarily at a solution of the problem of the chemical constitution of calcium lignosulphonate, which has been extensively studied by others and still remains not fully understood. It has rather taken the line of studying the physical-chemical and colloidal properties of this compound that might be expected to be related to its behavior as a dispersing agent for cement.

It is inherent in the very nature of the process that produces waste sulphite liquor that the composition of the calcium lignosulphonate itself varies and that the solids in the liquor are composed not only of calcium lignosulphonate but also of various impurities. While there is a general similarity in the pulping processes that produce waste sulphite liquor, there are differences in the conditions of cooking and differences in the original woods that lead to variations in the final product. Added to this are the changes in the waste sulphite liquor, which may be effected by processes through which it goes after cooking, for one purpose or another. There are, for instance, the fermentation processes used to produce alcohol or yeasts, and chemical treatments applied deliberately to separate out the lignosulphonate compounds in purified forms.

It would be expected that dispersion would necessarily be linked to the adsorption of the dispersing agent by the solid particles to be dispersed and also to the ionization characteristics of the adsorbed compounds. The degree of adsorption would in turn be related to the molecular weight of the dispersing agent, as well as its chemical characteristic. The ionization of the dispersing agent would be influenced by the degree of sulphonation, the number of other ionizable groups in the molecule, and the dissociation characteristics of the ionizaing groups.

Calcium lignosulphonate derived from waste sulphite liquor is polydisperse and fractions with average molecular weights as low as 400 and as high as 18,000 have been separated. From some sources it is much less polydisperse than from others. On certain liquors an average molecular weight of about 6,000 has been found, but it by no means follows that other liquors would have the same molecular weight. A considerable amount of work (2) has been done to study the molecular weight of calcium lignosulphonate and it has been found possible, by various means, to produce a material having almost any desired average molecular weight over a considerable range. This can be accomplished by separating different molecular weight fractions of the starting material, for example, by dialysis or by various processes of polymerization or depolymerization. It would be anticipated that the molecular weight would affect the degree of adsorption, and determinations of adsorption isotherms of different molecular weight fractions show that this is the case. As illustrated in Figure 1, the degree of adsorption increases markedly with increasing molecular weight.

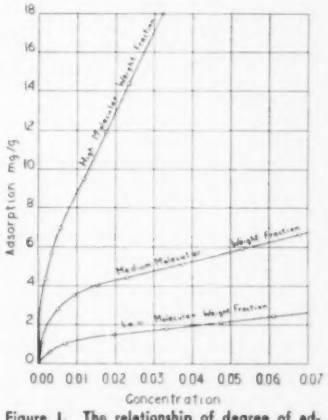

Adsorption mg/g
Concentration
0.00 0.01 0.02 0.03 0.04 0.05 0.06 0.07
0 2 4 6 8 10 12 14 16 18
High Molecular Weight Fraction
Medium Molecular Weight Fraction
Low Molecular Weight Fraction

Figure 1. The relationship of degree of adsorption and molecular weight of calcium lignosulphonate fractions.

Samples of waste sulphite liquor from different sources and even differ-

Presented at the 1949 Annual Meeting of the Forest Products Research Society, Grand Rapids, Mich.

ent molecular weight fractions of calcium lignosulphonate from the same source show differences in degree of sulphonation and also in the yhdrogen ion to sulphur ratio. It appeared theoretically that the degree of sulphonation, assuming equal adsorption, should determine the degree of dispersion of the cement. This did not appear to be the case, but another variable, the hydrogen ion-to-sulphur ratio, appeared to be of greater significance. Owing to the complexity of the problem, it was not possible to determine just what this relation is, although one undoubtedly exists.

Studies of the dissociation (*2*) of various salts of lignosulphonic acid, including the calcium salt, showed a rather peculiar behavior, in that in contrast to a high degree of dissociation for the acid, the calcium salt has a very low degree of dissociation. This explains the positive adsorption of the lignosulphonate ion by portland cement as due to the affinity of lignosulphonate ions for the cations on the surface of the cement particles. This is confirmed by the almost negligible adsorption of lignosulphonate ions by such absorbents as silica; whereas such materials as limestone absorb

Table I

Portland Cement-Calcium Lignosulphonate Adsorption Data

1.5 percent calcium lignosulphonate	Optical Density	Calcium Lignosulphonate Equilibrium Soln. Concn.	Concn. obtained graphically	Initial concn.	Lignosulphonate Adsorption
Ml.		Percent	Percent	Percent	G./10 g. Cement
0	0.000	0.0000	0.000	0.000	0.000
1	.008	.0022	.001	.010	.013
2	.012	.0033	.003	.020	.025
3	.022	.0061	.007	.030	.035
4	.046	.0128	.013	.040	.041
6	.088	.0247	.025	.060	.053
8	.133	.0373	.037	.080	.064
10	.178	.0499	.051	.100	.073
12	.237	.0662	.066	.120	.081
14	.292	.0817	.081	.140	.088

In the course of the study of the physical chemical characteristics of calcium lignosulphonate, conductometric titrations were used in an attempt to determine the degree of sulphonation and splitting of the lignosulphonate molecules. This method of titration disclosed three points of inflection in the titration curve corresponding to three different acid groups. One of these groups, the first, is obviously the sulphonic acid group. Another, as suggested by a number of investigators in this field, is probably a phenolic group.

(3) The third, which has been largely overlooked by previous investigators, may be a carboxyl group, but this is by no means certain. Obviously, the ionization of these active groups will affect the dispersing action of the calcium lignosulphonate.

The degree of dissociation of the calcium lignosulphonate should affect the degree of dispersion for a given quantity of dispersing agent absorbed. them in a manner similar to cement.

The problem is further complicated by the influence of the impurities associated with the calcium lignosulphonate in waste sulphite liquor. Particularly important among these are the sugars. In the neutralization of the sulphite liquor with lime, calcium salts are also obviously produced. In the studies of molecular weight, dissociation constants, and similar physical chemical properties, these impurities have been substantially removed, but they must be taken into consideration as far as the practical aspects of cement dispersion are concerned. It appears that the calcium salts in the product derived from unmodified waste sulphite liquor are not especially harmful, but the sugars adversely affect the cement reactions. These conclusions are reached by physical methods of test rather than by colloidal investigations. On the basis of these observations use of waste sulphite liquor from which the fermentable sugars have been removed in the alcohol process has been adopted, with superior results, to replace the unpurified liquor formerly used.

Table II

Specific Surface of Portland Cement Suspended in Water, With and Without Calcium Lignosulphonate

Calcium Lignosulphonate Adsorbed	Av. I_{tr}	Av. Σ Log I_{tr}	Av. Transmittancy Constant (1 G. Basis)	Av. Sp. Surface	Apparent Increase in Surface Dispersed over Undispersed
G. 100 g. cement[1]	Micro-amp.			Sq.cm. G[2]	Percent
Type I Cement: 90 percent Passing 325-Mesh Sieve; Sp. Surface in Kerosene, 1690 Sq.cm. g.					
None	26.8	0.572	603	1150	
0.2	24.5	.611	740	(1505)	31
.3	23.2	.635	743	1570	37
.4	21.3	.672	751	(1685)	47
.5	20.7	.684	748	1705	48
Type III Cement: 100 percent Passing 325-Mesh Sieve; Sp. Surface in Kerosene, 2590 Sq.cm. g.					
None	12.5	.903	605	1820	
.2	11.0	.959	720	(2300)	26
.3	10.1	.996	723	2400	32
.4	8.6	1.065	723	2575	41
.5	8.2	1.086	727	2630	44

From the work that has been done on the colloidal characteristic of calcium lignosulphonate some knowledge of its nature has been gained, but comparatively little of value in relation to cement dispersion has so far been derived. It has certainly been proved that removal of the carbohydrate impurities, particularly the sugars, is beneficial. While it seems probable that increase in molecular weight will improve the surface active characteristics of the compound, this conclusion is complicated by the fact that in these investigations the carbohydrate impurities were removed simultaneously with separation of higher molecular weight material by dialysis. There has been some indication that a change in the hydrogen ion-to-sulphur ratio will affect the cement dispersion, but this has been by no means definitely established. While the work done up to this time indicates that the degree of sulphonation of the lignin molecule plays a part, it has not yet been possible to establish what this is. The most practical result of these investigations has been the adoption of a purer calcium lignosulphonate. Even if it could be shown that changes in molecular weight, degree of sulphonation, or other characteristics of the lignosulphonate molecule would be desirable, there would still remain the problem of producing such a modified material economically.

Cement Dispersion

The action of a cement dispersing agent on portland cement in water is similar in its effect to the action of any dispersing agent in a solid-liquid system. The dispersing agent is adsorbed on the cement particles, which thereby acquire like electrostatic charges. (4) The cement particles repel each other and are therefore dispersed instead of flocculated, as they would normally be. The adsorption of calcium lignosulphonate by portland cement is illustrated in Table I. If a suspension of portland cement in the water is subjected to a surface area determination in a turbidimeter the increase in surface area so found illustrates the degree of dispersion of the cement. Some data of this nature are shown in Table II. That the cement particles are dispersed by the mutual repulsion of electrical fields around the particles is demonstrated by observation of their electrophoretic migration. (4) Cement particles suspended in distilled water show no tendency to migrate toward either electrode but agglomerate and settle out rapidly. On the other hand, when suspended in a calcium lignosulphonate solution migration toward the anode is readily observable.

Calcium lignosulphonate is not the only surface-active material that will disperse portland cement. One reason

for using calcium lignosulphonate derived from waste sulphite liquor for this purpose is, of course, low cost. Another, and perhaps more important reason, is that the mere dispersion of the cement is not enough. The dispersing agent must not interfere with the hydration reactions of the cement, which are both complex and very sensitive. A study by means of photomicrographs of the hydration reactions of portland cement and the pure portland cement compounds in distilled water and in water containing dissolved calcium lignosulphonate shows that there are differences in the rate of reaction and in some cases in the nature of the hydration reactions. At low concentrations, however, calcium lignosulphonate does not adversely affect the hydration reactions but might be expected to have a beneficial effect due to the higher degree of dispersion and therefore greater surface area in contact with the water. In higher concentrations the calcium lignosulphonate evidently acts as a protective colloid, which retards hydration. The behavior of the calcium lignosulphonate with cement is further complicated if impurities are present. Almost any soluble compound will either accelerate or retard the hydration of cement. Sugar is well known as having a particularly marked retarding effect, and any sugar present as an impurity in the calcium lignosulphonate will have a retarding effect. It is therefore necessary to use a reasonably pure calcium lignosulphonate and to use it in such proportions that maximum dispersion is secured without introducing the retarding effect of a protective colloid. Investigation has shown that proportions between about 0.15 and 0.30 percent of the weight of the cement accomplish this objective. The figures are given as percentages of the weight of the cement, as this is customary practice in the concrete field, but actually the important factor is not the relation between the quantities of cement and lignosulphonate but the concentration of the solution of lignosulphonate used in making a workable concrete mix.

Action of Cement Dispersion in Concrete

The action of the cement dispersing agent in portland cement concrete is to deflocculate or disperse the cement particles, or at least to reduce the inter-particle attraction. This has a number of important effects. The reactions of portland cement are surface reactions between the particles of cement and the water, which therefore are functions of the surface area of the cement. For this reason cement manufacturers in recent years have consistently increased the fineness of grinding of cement clinker. Unfortunately, the full surface area produced by finer grinding is not effective due to the flocculated condition of the cement in its normal state in the mix. Actually, this tendency toward agglomeration increases with increasing fineness so that the beneficial effects of fine grinding are in some measure offset by this flocculation. By dispersing the cement particles the effective surface area of the cement in the mix is increased.

Another effect of dispersing the cement particles is that water trapped within the particle clumps in the flocculated condition is released to become part of the liquid phase of the concrete. This combined with the more ready movement of the smaller particles, contrasted with clumps of particles, past each other increases the fluidity of the mix with a given water content. What is important is the converse of this, that by dispersion of the cement the water required for a concrete of a given consistency is decreased.

A third fundamental effect of dispersion of the cement with calcium lignosulphonate is that a small amount of air, in the form of microscopic bubbles, is entrapped in the concrete. While there are other means of accomplishing this purpose, the entrainment of air, as this phenomenon is known in concrete technology, is most advantageously accomplished by dispersion. The beneficial effects of air entrainment will be briefly pointed out later.

Effects on Concrete Properties

Since the properties of concrete for given aggregates are primarily dependent on the amount and quality of the cement paste, any influence which alters the nature of this paste will inevitably influence the properties of the mix. Two phases in concrete making should be differentiated. These are the first phase, when the concrete is plastic and ability to place the concrete is of primary importance, and the second phase, after the concrete has hardened and cured when certain other properties are of most significance.

Unless concrete is workable during the plastic stage it is impossible to produce a sound structure, regardless of any other properties of the mix. This property of workability may be considered as made up of two components: mobility or ease of flow, and cohesiveness, which includes resistance to segregation.

Dispersion of the cement particles increases mobility in the manner described in Table III.

Table III
Increase in Mobility

Mix	Water-Cement Ratio	Slump
	Gal. per sack	In.
Untreated	6½	1
Dispersed cement	6½	5

Dispersion also increases the cohesiveness of the mix, partly due to the increased surface area of the cement and partly due to the entrainment of a small amount of air. The mix, while still flowing readily, becomes more "fatty" or "butery." As a consequence, with a mix that can be as easily or more easily placed in the forms, the tendency of the components of the concrete toward segregation is reduced. Gross defects in the concrete, such as honey-combing and sand streaking, are thereby more or less prevented.

A particular aspect of the increased cohesiveness of the mix secured by dispersion is the reduced tendency toward bleeding as shown in Table IV.

Table IV
Reduction in Bleeding

(Concrete mix = 6.0 sacks per cu. yd.)

Addition	Bleeding	
	Cement I	Cement II
	Percent	Percent
None	100	100
Dispersing Agent	25	20

Bleeding is essentially segregation of the water in the mix in an upward direction. This phenomenon is also commonly called water gain. Bleeding is an highly undesirable phenomenon, for two reasons. In its upward movement through the mix the water tends to collect under the larger pieces of aggregate, forming pockets on the under side, so that the aggregate is not well bonded to the cement paste. These pockets constitute points of weakness and of attack by destructive agencies and also diminish the strength of the concrete. The second effect of bleeding is to bring a layer of fine material to the top surface of the concrete with a very high water content, commonly known as laitance. Due to the high water content this layer shrinks excessively and has very low strength.

In the hardened state the properties of concrete that are significantly affected by the dispersion of the cement are strength, volume change, permeability, and durability. The strength, as shown by Duff Abrams, (5) is directly related to the ratio between the water and the cement in the mix. Reduction of the water for a mix of given workability through dispersion therefore increases strength as shown in Table V. Volume change, particularly shrinkage, is governed by the volume of the cement paste, that is the volume of the cement plus the volume of the water in the mix, and for a given mix is reduced by dispersion, again through the reduced water requirement for a given consistency. (6) A further aspect of this property is that for a given strength the cement content of the mix can also be reduced, further decreasing volume change. Permeability is directly related to the total water content per unit volume of the concrete mix, because penetration

Table V
Compressive Strength

Cement Content	Compressive Strength 28 Days	
	No Addition	Dispersing Agent
Lb. per Cu. Yd.	Lb. per Sq. In.	Lb. per Sq. In.
300		1, 840
375	1, 500	2, 575
450	2, 150	3, 300
525	3, 580	4, 600
600	4, 350	

of liquids through the concrete is dependent on formation of an interconnecting system of capillaries by the water that does not combine with the cement as it evaporates from the concrete after it has hardened. Again, the reduction in water for a given consistency by dispersion of the cement reduces permeability as shown in *Figure 2*.

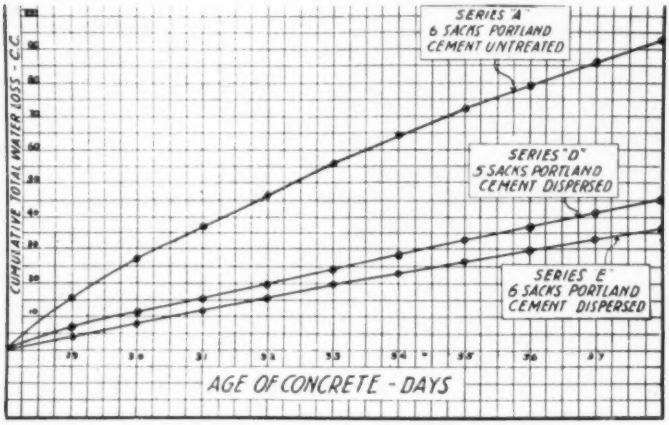


Figure 2. Concrete permeability with and without cement dispersion.

Finally, durability may be considered. In relation to concrete this is usually taken to mean the resistance of the concrete to weathering. The disintegrating influences of weathering are primarily two: freezing and thawing, and attack by corrosive solutions. Resistance of concrete to freezing and thawing is greatly enhanced by the entrainment of a suitable amount of air, which can be accomplished through dispersion of the cement with calcium lignosulphonate as shown in *Figure 3*. Improved resistance to corrosive solutions is secured through reductions in permeability of the concrete which, as has been noted above, is secured by cement dispersion as shown in *Figure 4*.

One particular problem arises in connection with construction of large concrete masses and, in fact, plays some part even in relatively thinner members. This is the effect of the heat of hydration of cement on volume change. Where large masses of concrete are placed the exothermic hydration reaction of the cement will raise the temperature of the mass considerably above that of the surrounding atmosphere, especially as the concrete is a fairly good insulator. This rise in temperature obviously causes expansion. Subsequently, the mass will gradually cool to the temperature of the surrounding atmosphere and in so doing will contract. The volume change involved is very apt to cause cracking of the mass. It has been shown that calcium linosulphonate in the concrete does not affect the amount of heat evolved or, to any material extent, the rate of heat evolution. (7) If advantage is taken, however, of the increased strength secured by dispersion of the cement, the amount of cement in the concrete can be reduced, which in turn reduces heat evolution and reduces the danger of cracking through excessive temperature rise. (8)

Another aspect of the use of calcium lignosulphonate in concrete is that of its employment as a grinding aid in the manufacture of cement. In the manufacture of cement the burned clinker is ground to a certain degree of fineness in a ball mill or similar equipment. Addition of a very small percentage of purified calcium lignosulphonate, usually combined with certain other reagents, will increase the efficiency of grinding of the clinker, that is, will grind to a given surface area with a reduced power imput or, what is the same thing, give a higher output from a given mill. The incorporation of the calcium lignosulphonate in the cement in this manner also, in some measure produces the beneficial effects of dispersion, but only in a small measure, since the quantities required to give highest grinding efficiency are very much smaller than those required to secure the full effects of cement dispersion. Considerable quantities of calcium lignosulphonate derived from waste sulphite liquor have been used in this manner.

Conclusion

The application of calcium lignosulphonate from waste sulphite liquor to the dispersion of portland cement in concrete mixes constitutes an advance in concrete technology. It produces beneficial effects on the concrete mix, both in its plastic state and after hardening. Furthermore, it makes most economical use of the cement. While the general mechanism of cement dispersion with calcium lignosulphonate has been investigated and is understood, there remain many obscure points with relation to the constitution and characteristics of the lignosulphoas they affect its performance with cement. The improved grinding of cement clinker effected by the addition of small proportions of calcium lignosulphonate to the mill makes possible in some cases production of cement of a fineness that could not otherwise be produced with the usual equipment, and also contributes to the economy of cement manufacture.

Substantial quantities of waste sulphite liquor have been utilized to produce calcium lignosulphonate for use with portland cement either as a grinding aid or as additions to the concrete mix to secure the benefits of cement dispersion. The quantity of waste liquor so utilized, however, represents only a small fraction of that produced. Only a small proportion of the cement produced has been treated in one way or another with calcium lignosulpho-

Figure 3. Effect of dispersion of cement upon resistance of concrete to freezing and thawing. (above) Untreated concrete—150 cycles of freezing and thawing. Loss in weight—73%. (below) Dispersed cement, same design and consistency—150 cycles of freezing and thawing. Loss in weight—10%.

nate, but it may be of some interest to consider the potentialities. If the annual production of portland cement in the United States is taken as 200,000,000 barrels it may be seen that to grind all of this cement, using calcium lignosulphonate as a grinding aid at the rate of 0.03 percent of the weight of the cement, would consume considerable amounts. If calcium lignosulphonate were added to all concrete made with 200,000,000 barrels of cement annually, at the rate of 0.2 percent of the weight of the cement to secure cement dispersion, the consumption would be six to seven times as large.

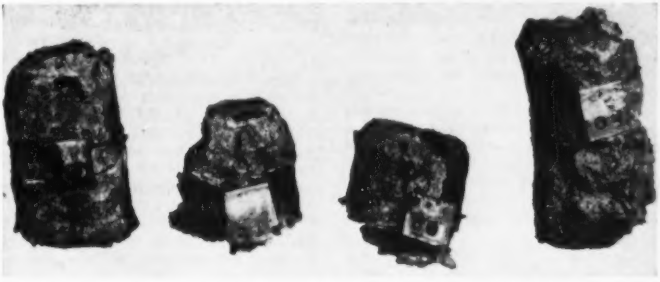
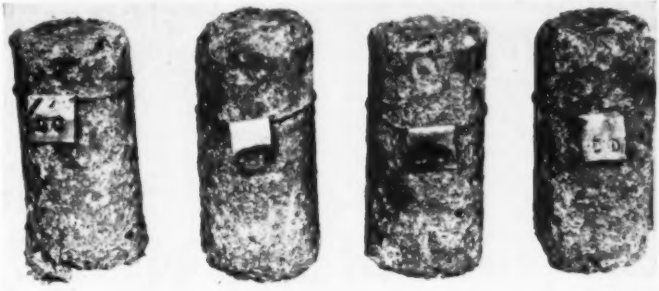


Figure 4. Effect of dispersion of cement upon resistance of concrete to corrosive solutions. (above) Untreated concrete—2 years in 8% magnesium sulphate. (below) Dispersed cement —same desiign and consistency—2 years in 8% magnesium sulphate.



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The Market for Bleached Sulfate Pulp

By

ROBERT S. ARIES[1] and WILLIAM COPULSKY[2]

A market survey[3] has been completed which shows that the market for bleached sulfate pulp is expanding rapidly. It is not believed that production will catch up with consumption in the near future. The supply situation is especially acute for non-integrated paper and board mills which supply must depend upon bleached sulfate pulp surpluses of integrated mills for their supply.

Introduction

Although bleached sulfate pulp did not appear on the market until about 1934, at least one Southern mill, the Champion Paper and Fibre Company at Canton, N. C., started production for their own use in 1927.

The greatest problem which had to be overcome in production of bleached sulfate pulp was the retention of pulp strength in bleaching. Although methods of bleaching were generally improved, the greatest advance was made with the commercial use of chlorination and caustic extraction stages. Strangely enough, these improvements were described in the literature as far back as 1830 but did not come into commercial use until nearly 100 years later.

This improvement in bleaching methods marked the beginning of the rise of sulfate pulp from the bottom to top position in importance among bleached pulps. Spruce wood ceased to be the most important pulpwood. Now other softwoods; pines, Douglas Fir, larches, etc., could be converted to high grade bleached pulps. Even hardwoods could be used to better advantage.

The sulfate pulp process can reduce almost any wood to pulp; and the action is more rapid, the yield higher and the pulp stronger, than those from the sulfite or soda process. The new bleaching process enabled most sulfate pulps to be bleached, and the advantages of better yields and higher strengths carried through to the bleached pulp, at least in some measure.

The bleached sulfite and sulfate pulps seldom competed; the new pulp entered an expanding market and the sulfite market remained more or less stationary. The two pulps differ in properties and are not exactly interchangeable. For a sulfite pulp user to change to sulfate, he must adapt his papermaking to the new pulp and this is being done to an increasing extent.

Bleached sulfate pulps are characterized by high strength properties and are available in various degrees of whiteness. In general the more it is bleached, the lower the yield, and also, unless bleached by modern controlled processes, bleaching may reduce its strength somewhat. High strength, high color bleached sulfate pulps command premium prices over lower grades.

Bleached sulfate pulps are either used alone or blended with inferior pulps. Used alone, they are converted into papers for bags, food containers,

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[3] This article is a condensation of a comprehensive report on bleached sulfate pulp recently completed by R. S. Aries and Associates, Consulting Engineers and Economists, Brooklyn, N. Y.

charts, maps, documentary, envelopes, tags, ledgers, bonds, waxing, onion skin, writings, cover stock, offset, parchments and many other specialties.

Blended, they are used with groundwood pulps and with sulfite and soda pulps, especially those made from short fibered woods or hardwoods. The added strength enables operations at higher machine speeds and also allows the incorporation of much more of fillers such as clay and calcium carbonate.

Bleached sulfate pulp is superior in strength to sulfite and there are grades of bleached sulfate stronger even than unbleached sulfate. Bleached sulfate pulp can be used to make any paper made from sulfite and it is unexcelled for making tough papers, such as greaseproofs, high wet strengths and the like.

Producers

Bleached sulfate pulps are differentiated into Northern and Southern grades and the Northern is often favored by a differential of about ten dollars per ton. This differential is usually for Northern sulphate made from spruce and does not apply to that made from Jack pine.

The superiority of the Northern grade is due to the kind of wood used. The more rapid growing southern pines give coarser fibers and the pulp often contains some short-fibered pulp from hardwoods. About 10% of hardwoods are often added because of the shortage of pine pulpwood and oversupply of hardwoods.

The length of cooking time in Southern mills is usually shorter and yields pulps not so easily bleached as those made in the North with longer cooking cycles.

The increase in pulpwood-costs during recent years has increased the tendency toward shorter cooking cycles to produce harder pulps and higher yields, even at the expense of higher bleaching costs.

Almost the entire market supply of bleached sulfate pulp, available from domestic sources, is from the South. Northern bleached sulfate market pulp is almost entirely imported from Canada and Scandinavia, although Weyerhauser recently placed into operation a new bleached sulfate mill at Longview, Wash.

In the older paper-making regions, especially in New England, the Lake States and the Middle Atlantic States, relatively little bleached sulfate pulp is produced, despite the high capacity of regions to make the better grades of paper in which bleached sulfate paper is required. At the same time, while the capacity to produce bleached sulfate grades of pulp has increased in the United States from 851 thousand tons in 1942 to 1,538 thousand tons in 1948—a gain of 80%; the capacity to produce bleached sulfite grades of pulp has increased in the United States from 1,817 thousand tons in 1942 to 2,065 thousand tons in 1948—a gain of only 14%.

Moreover, little of the available bleached sulfate pulp is "market pulp" —that is available for sale to paper mills not producing their own pulp.

Market pulp is only a small portion of the total bleached sulfate pulp consumption. The supply is not large and shows no real signs of increasing. Only about 6% of the U. S. production of bleached sulfate pulp is market pulp — this percentage has shown a tendency to decrease slightly since 1946, so that larger imports are required of market pulp. In 1948, 18% of the pulp consumed was market pulp, and 63% of this was imported from abroad.

Under certain conditions, the producer of bleached sulfate pulp might decide to sell it in the market. This would be true if his capacity for economically and efficiently producing pulp was at any one time greater than his ability to sell the paper products he could make from pulp. However, as far as is known, only about five North American bleached sulfate pulp producers regularly have a pulp capacity greater than their capacity to use this pulp and are thus able to produce bleached kraft pulp for the market. Actually, all of these companies also produce paper products in which bleached kraft is used, and only a small portion of the bleached sulfate pulp produced is market pulp.

Up to a dozen new bleached sulfate pulp mills have been proposed for North America in the next few years. Most of these are not for market pulp. Two proposed Canadian mills plan to produce bleached sulfate pulp for the market.

The plant of Nanaimo Sulphate Pulp, Ltd., a subsidiary of the H. R. MacMillan Export Co., Ltd., is under construction on Vancouver Island with a planned capacity of 200 tons per day, or about 60 thousand tons of bleached sulfate pulp per year, principally for export to the United States as market pulp.

A projected mill of Alberta Pulp Mills, Ltd., has been announced, but no date for start of construction has been set. The proposed mill would be built at Red Deer, Alberta, 100 miles north of Calgary, with a capacity of 175 tons per day of pulp and paper products. It is planned to sell a small amount of bleached kraft pulp in the market.

The prospects therefore, for a very substantial increase in market bleached sulfate pulp in the near future are not very good.

The amounts of bleached pulp imported from outside of North America by the United States are relatively small, and usually have been imported at premium prices. The combination of lack of modern equipment and fuel shortages is expected to hold down European production of bleached sulfate pulp for a considerable time. Even when this production is revived, the greater part of it will be required for local use. For example, only a small part of Sweden's bleached kraft pulp output goes to the United States. This percentage of production exported to the United States has tended to decline since the end of the war in Europe.

Prices

Bleached sulfite pulp hit a low of 35 dollars per ton in the early thirties at the height of the depression — a price far below production costs. Probably, very little was sold at this price. The price leveled off to the $50-$75 range in the prewar years, and after the lifting of O.P.A. controls, climbed rapidly to a high in 1948 when it started to decline to its present level. Bleached sulfate pulp prices show a similar history, with a consistent premium over the bleached sulfite prices which is difficult to fix quantitatively because of the difference in the volume of production, and supply and demand of the two types of pulp at any one time.

Production and Consumption of Bleached Pulps

The rapid growth in the production of bleached pulps is shown in *Table I.*

Table I

Thousand Tons	1928	1938	1948
Total Pulp	4511	5934	12872
Total Bleached Pulp..	763	1326	3174
Bleached Pulp—			
% of Total	17%	22%	25%
Bleached Sulfite—			
% of Total	16%	17%	15
Bleached Sulfate—			
% of Total	1%	5%	10%

This summary discloses that although the growth of bleached pulp has been at a faster rate than that of all pulp production, this increase in growth has been due to bleached sulfate pulp, and not bleached sulfite pulp, which has continued to grow in production at the same rate as all pulp.

Bleached sulfate production is increasing at a rate unmatched by other types of pulp.

In considering the new supply of bleached sulfate pulp that is available every year, care should be taken to distinguish between the many grades of bleached sulfate pulp available according to the degree of pulping, and the wood used. As has been stated, the bleached sulfate pulp produced in the South from southern pine and hardwoods generally have such characteristics as to make them less suitable for high grade paper products as compared to those pulps produced from the Northern Spruce. The extent and character of the bleaching process used varies not only the strength, but the color as well. High quality bleached sulfate pulps have been produced commercially since 1927. No doubt shortages of labor and materials during the war tended to hold back the even more rapid growth of this product.

Most of the pulp produced is used to make paper by integrated pulp and paper mills. Very ittle is sold to non-

integrated paper mills. A great deal of the new supply of market pulp is imported, so that paper manufacturers buying bleached sulfate pulp supply are subjected to uncertainties of delivery and price because of dependence upon imports. The Lake States are particularly unfortunate in that no market supply of bleached sulfate pulp seems to be available locally despite the large number of non-integrated mills in that area. Market pulp must be imported from Europe or Canada or brought in from the South.

Table II

Grade	Consumption: Thousand Tons 1939	Consumption: Thousand Tons 1948	Consumption: Lbs. Per Capita 1939	Consumption: Lbs. Per Capita 1948	Percent Increase 1948 over 1939: Tonnage	Percent Increase 1948 over 1939: Per Capita
Book Paper	1538	2314	23	32	50	39
Fine Papers	594	1139	9	16	92	78
Wrapping Papers	2213	3117	34	43	41	26

	Production, Thousand Tons 1939	Production, Thousand Tons 1948	Percent Increase 1948 over 1939
Folding Boxboard	1385	2131	54

The Future of Bleached Sulfate Pulp

The future of bleached sulfate pulp of course, depends upon the future of the paper products in which it is used.

Not only has the consumption of paper and board increased rapidly over the years, but more important, the per capita consumption of paper has also increased so that each person in the United States is theoretically consuming approximately 1½ times as much paper and board as he did ten years ago—three times as much as he did thirty years ago, and six times as much as fifty years ago.

Since the war, the use of bleached sulfate pulp has increased tremendously. New uses have been found in waxing papers for frozen food packs, meat and bread wrappers, protective linings in cans, boxes and barrels, twisting and spinning papers and toweling.

The principal uses of bleached sulfate pulp are in book papers, fine papers and in wrapping papers and in folding boxboard in the paperboard field. *Table II* shows the growth in production and consumption of various grades of paper and boxboard.

It is difficult to estimate quantitatively the future demand for bleached sulfate pulp because the product is relatively new, and it is rapidly being improved in quality and utility. It will probably, because of its superior qualities, continue to replace a considerable amount of bleached sulfite pulp. Bleached sulfite pulp seems to have reached its peak several years ago. Capacity is declining slightly and the trend of decline appears to be continuing. It seems apparent that bleached sulfite pulp has already passed through the advancing stage of its cycle of use, and for many uses is being subjected to technological displacement by the superior bleached sulfate pulp.

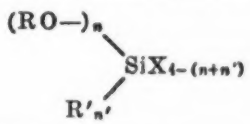
Meanwhile the market supply of pulp has failed to keep pace with increased need for bleached sulfate pulp. Shortages of bleached market sulfate pulp in the United States will apparently continue for a number of years, assuming that there will be no major decline in the national economy.

Patent Abstracts

● ***In addition to abstracts on the technology of pulp, paper and related industries, miscellaneous abstracts which may provide useful information to our readers are included herein.***

2,469,625—Method of Rendering Hydrophilic Substance Water Repellent. Arthur J. Barry, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich. Filed December 10, 1943—Issued May 10, 1949.

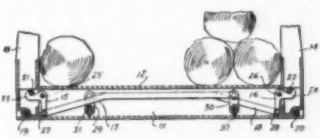
The method which comprises applying to the surface of a water-wettable solid material a liquid comprising an organo-silicon compound having the



general formula wherein each R represents a hydrocarbon radical and at least one R is an alkyl radical containing at least 8 carbon atoms, R' represents a monovalent hydrocarbon radical, X is a halogen, and n and n' are whole numbers having a sum not greater than 3, n being a number from 1 to 3 and n' being a number from 0 to 2, heating the treated solid material to a temperature at which a hydrogen halide is evolved, and thereafter washing the treated surface of the solid material with an organic solvent for the organo-silicon compound, to remove the unadsorbed excess of said compound.

2,469,760—Stake Releasing Means for Vehicle Log Bunks. William A. Berry, Essex Junction, Vt. Filed February 11, 1947—Issued May 10, 1949.

In a log bunk for holding logs on a vehicle platform, at least two bolsters arranged in spaced relation and mounted on said platform, each of said bolsters embodying a pair of spaced, parallel channel beams supported on said platform, a stake interposed between said pair of beams adjacent the ends thereof and mounted for pivotal movement about a horizontal axis, a horizontally disposed pin carried by said stake, a latch positioned between said beams adjacent said stake and pivotally connected to said beams, there being a hook on one end of said latch for engaging said pin, a stud secured to the other end of said latch, a lever connected to said stud, and manually-operable means connected to said lever for actuating the latter, said last-named means comprising a link having one end pivotally connected to said lever, a horizontally disposed shaft arranged at right angles with respect to said link and having one end secured to the other end of the latter, and an actuating handle secured to the other end of said shaft.



2,470,191—Rapid Ripening of Cellulose Esters. George W. Seymour, Blanche B. White, and Anthony J. Bellucci, Cumberland, Md., assignors to Celanese Corporation of America. Filed December 6, 1945—Issued May 17, 1949.

In a process for the production of highly stable ripened organic acid esters of cellulose wherein cellulose is esterified with an aliphatic acid anhydride employing an inorganic acid as catalyst and an aliphatic acid as a solvent, the steps which comprise neutralizing the acid catalyst in the primary cellulose ester solution obtained on completion of esterification by adding an alkaline neutralizing agent thereto, and then ripening and stabilizing the cellulose ester in the primary solution to a secondary cellulose ester at a temperature of at least 125° C. and at a pressure of at least 20 pounds per square inch.

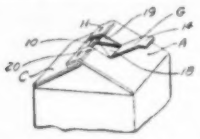
2,470,192—Rapid Ripening of Cellulose Esesters. George W. Seymour, Maplewood, Blanche B. White, Summit, and Anthony J. Bellucci, East Orange, N. J., assignors to Celanese Corporation of America, a corporation of Delaware. Filed September 10, 1947—Issued May 17, 1949.

In a process for the production of highly stable, ripened organic acid esters of cellulose wherein cellulose is esterified with a lower aliphatic acid anhydride, employing an inorganic acid as catalyst and an aliphatic acid as a solvent, the acid catalyst in the primary cellulose ester solution obtained on completion of esterification is neutralized by adding a neutralizing agent thereto, and the cellulose ester in the primary solution is ripened to a secondary cellulose ester of the desired acyl value, the step of effecting said ripening under pressure and at a temperature of at least 125° C. in an oxygen-free, inert atmosphere.

2,470,199—Carton and Secondary Closure Therefor. George Stewart Vivian, Surbiton, England. Filed September 7, 1945—Issued May 17, 1949.

In a carton, the combination of, side walls,

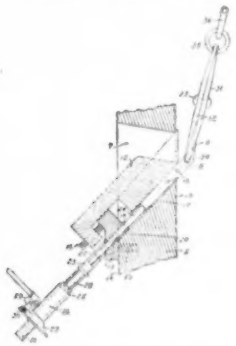
the centers of the upper edges of which are folded inwardly to form a bellows fold, and back and front walls flattened on either side of the top portions of said folded side walls to form a peaked roof, said back wall having a flap extending from the top thereof folded downwardly towards said



front wall, said front wall having an area at the top thereof adapted to be torn downward and bent outward and downward to form an opening flap, the top edge of said opening flap overlying the edge of the downwardly folded flap of said back wall when the carton is in the initial sealed condition, the converging edges of said inwardly folded side walls confining the flow of material through said secondary opening when said flap is torn downward.

2,470,261—Apparatus for Handling Chipper Knives. Stanley D. Payzer, Wausau, Wis., assignor to D. J. Murray Manufacturing Co., Wausau, Wis. Filed October 9, 1944—Issued May 17, 1949.

A blade removing assemblage for a wood chipper having a rotary disc provided with a slot and a flat blade normally confined within the slot, an



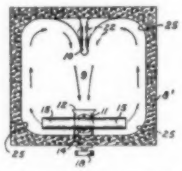
elongated blade holding plate secured to the disc near the slot and rearwardly of the blade, said plate having an opening therethrough directed toward the blunt end of the blade and also having alined pivots associated with its opposite ends, the assemblage comprising, a U-shaped yoke having opposite side arms swingably suspended from said plate pivots and also having a jack mounted thereon between said side arms, and a cross-bar slidably confined between said yoke arms and having a pin movable through said plate opening toward said blade by coaction with said jack to eject the blade from its confining slot.

2,470,262 — Method of Handling Chipper Knives. Stanley D. Payzer, Wausau, Wis., assignor to D. J. Murray Manufacturing Co., Wausau, Wis. Filed October 9, 1944—Issued May 17, 1949.

The method of removing a knife blade provided with opposite end detents and an intervening cutting edge from a chipper rotor revolvable about a horizontal axis and having a radial opening within which the knife is normally confined in an inclined position by a wedge bar disposed within the opening and a holding plate coacting with the bar and having opposite end sockets and transverse guide holes extending therethrough parallel to the blade, which method comprises, revolving the rotor to upwardly incline the blade with its cutting edge uppermost and releasing the wedge bar, slidably inserting pins within the guide holes and applying uniform pressure to the lower blunt end of the blade through the pins to partially eject the upper sharp blade end from within the rotor opening, and thereafter applying an upward pull to the blade detents to finally withdraw the blade bodily from within the rotor.

2,470,267 — Paper Pulp Agitator. John A. Rosmait, Appleton, Wis., assignor to D. J. Murray Manufacturing Co., Wausau, Wis. Filed March 10, 1945—Issued May 17, 1949.

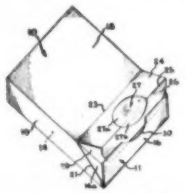
A paper pulp agitator, comprising, a chest forming a centrally unobstructed pulp storage chamber bounded by a flat front upright surface and a rear surface having an upright chamber



bounding wedge projecting centrally and forwardly therefrom toward the chamber center and toward the mid-portion of the front surface, said wedge having concavely curved chamber bounding surfaces merging along smoothly curved opposite side surfaces with said front surface and being of gradually increasing wedge-shaped transverse cross-section approaching the bottom of the chamber, and said chamber bottom being inclined downwardly and forwardly away from the largest lower wedge end and cooperating with the wedge bounding surfaces to provide a continuous smooth upwardly and rearwardly inclined liquid guiding surface extending from the lowest front portion of the chamber to the uppermost rear portion thereof, and a circulating pump located within said chamber near the lowest mid-portion of said front surface and having an unobstructed inlet in open communication with the chamber center and directed centrally away from the lower wedge extremity and also having an outlet directed upwardly along and laterally toward the opposite side surfaces of said chamber at said uppermost chamber portion.

2,470,270—Folding Box. Jesse Srofe, Cincinnati, Ohio, assignor to The Globe-Wernicke Company, Cincinnati, Ohio. Filed August 29, 1946—Issued May 17, 1949.

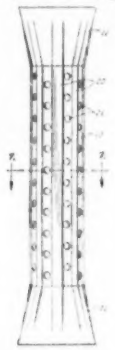
In a folding box comprising an outer case member, a flap forming a portion of the top



of the said case member, said flap being hinged to the remaining portion of the top, a tongue hinged to the free end of the flap and extending downwardly at the end of the case member, a receptacle sliding within said case member, a viewing window formed both in said flap and in said tongue, a transparent closure over said window attached to said flap and tongue and extending across the hinge therebetween, a cut-away portion in the front of the receptacle cooperating with the portion of the window in the tongue whereby the contents of said box are exposed to view from the front and top of said box, and the hinge which connects the flap to the top of the case member being located rearwardly of the front of the case member.

2,470,549 — Textile Thread Carrier. Charles K. Dunlap, Hartsville, S. C., assignor to Sonoco Products Company, a corporation of South Carolina. Filed April 1, 1946—Issued May 17, 1949.

A textile thread carrier comprising a fibrous tubular body formed with integral conical end



portions and reinforcing ribs, said end portions and reinforcing ribs being formed by folding said tubular body at intervals parallel with its longitudinal axis but in a longitudinal extent terminating short of each end of said body and flattening the folds thus formed against said body whereby said reinforcing ribs are set in place.

2,470,577 — Complex Calcium Carbonate-Silicate Pigment Product and Method of Making Same. Howard F. Roderick, Grosse Ile, and Fritz M. Zorn, Wyandotte, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed October 11, 1945—Issued May 17, 1949.

The method of making a complex calcium carbonate-calcium silicate product which comprises, adding in water solution, an alkali metal hydroxide to an alkali metal silicate having a silica-alkali metal oxide molar ratio in the range of water glass to adjust the resultant molar ratio of silica to alkali metal oxide in such solution in the range of 1.1-1.55 to 1, adding an alkali metal salt of carbonic acid thereto in an amount sufficient to correspond stoichiometrically to 40-85% by weight of calcium carbonate in the final product, and then adding calcium chloride to precipitate simultaneously therefrom an insoluble complex calcium carbonate and calcium silicate product.

2,470,641—Disintegrated Newsprint-Boric Acid Insulation Composition. Frederick G. Portz, Waukesha, Wis. Filed May 12, 1945—Issued May 17, 1949.

An insulation composition consisting of approximately twenty-five pounds of dry powdered boric acid mixed with seventy-five pounds of dry disintegrated newsprint.

FINANCIAL RECORD

	Per Share Earnings		Indic.	Oct. 25
	Calendar Year 1948	12 Mo. to Approx. 6/30/49	Annual Divid. Rate	Approx. Market Price
PREFERRED STOCKS				
Armstrong Cork Co. $3.75 Cum.	$46.33*	$38.47*	$3.75	$98½
Armstrong Cork Co. $4.00 Cum. Conv.	46.33*	38.47*	4.00	114
Celotex Corp. 5% Cum.	26.42c	10.33p	1.00	17
Champion Paper & Fibre $4.50 Cum.	99.97f	19.91j	4.50	98¼
Container Corp. of Amer. 4% Cum.	105.41	90.43a	4.00	99¼
Crown Zellerbach $4.20 Cum.	63.92i	61.00p	4.20	102
Crown Zellerbach $4.00 Cum. Conv. 2nd	60.56i*	57.90p*	4.00	100½
Dixie Cup Co. $2.50 Cum. Conv. Cl. A	10.10	10.04	2.50	50⅜
Flintkote Co. $4 Cum.	83.25	66.07	4.00	103⅜
Robert Gair Co., Inc. 6% Cum.	17.08	13.73	1.20	17¼
International Paper Co. $4 Cum.	263.00	254.71	4.00	101½
Johns-Manville $3.50 Cum.	209.89	204.89a	3.50	113¼
Kimberly Clark Corp. 4½% Cum.	80.74	74.36	4.50	102¾
Kimberly Clark Corp. 4% Cum. Conv. 2nd	41.59*	44.25*	4.00	104
MacAndrews & Forbes 6% Cum.	62.23	64.10a	6.00	137½
Mead Corp. 4¼% Cum.	73.46	68.78k	4.25	92½
Mead Corp. 4% Cum. Conv. 2nd	29.91*	24.30k*	2.00	33½
Paraffine Cos. Inc. 4% Cum. Conv.	156.11	136.31	4.00	103
Rayonier Inc. $2 Cum.	16.43	13.99	2.00	30⅜
St. Regis Paper Co. 4.40% 1st A	79.90	51.11	4.40	82¼
Scott Paper Co. $3.40 Cum.	59.06	55.14	3.40	97½
U. S. Gypsum Co. 7% Cum.	314.45	296.82	7.00	186½
United Wallpaper Inc. 4% Cum. Conv.	(d)0.79	20.54	2.00	26½
West Virginia Pulp & Paper 4½% Cum.	79.45c	69.93p	4.50	108½
COMMON STOCKS				
APW Products Co.	$0.73	(d)$0.56	(m)	3⅜
American Writing Paper Corp.	(d)0.15	(d)0.16	$0.25	6⅛
Armstrong Cork Co.	7.54	6.13	3.00	47½
Celotex Corp.	7.21c	2.75p	1.00	18¼
Certain-Teed Prods. Corp.	4.02	3.21	1.00	14⅛
Champion Paper & Fibre	8.70f	1.70j	2.00	26¾
Congoleum Nairn Co.	5.78	4.92	2.25	28⅞
Container Corp. of America	10.12	8.50a	4.50	39¾
Crown Zellerbach	7.16i	6.68p	2.00	28¼
Dixie Cup Co.	6.70	6.65	1.50	33¼
Eastern Corp.	4.76	1.27	(h)	11⅜
Flintkote Co.	5.86	4.40	2.50	28⅝
Robert Gair Co., Inc.	2.67	2.10	0.70	6⅞
Great Northern Paper Co.	4.63	5.32	2.80	39¼
International Paper Co.	16.73	16.19	5.00	63⅞
Johns-Manville Corp.	5.22	5.07a	2.00	42¾
Kimberly Clark Corp.	5.02	4.55	1.65	24⅜
MacAndrews & Forbes Co.	3.68	3.79a	2.50	37
Marathon Corp.	4.11c	3.42	1.40	24¼
Mead Corp.	6.36	5.84k	1.00	13⅜
National Container Corp.	2.28	1.38	0.40	7¾
Paraffine Cos. Inc.	2.45	2.14	1.20	18¾
Rayonier, Inc.	9.09	7.55	2.00	24¼
Ruberoid Co.	11.80	9.48	3.25	53⅜
St. Regis Paper Co.	2.71	1.64	0.60	7⅝
Scott Paper Co.	4.15	5.02	2.50	34⅜
Sutherland Paper Co.	6.02	5.12a	2.50	63½
Union Bag & Paper Corp.	9.17	6.50	3.00	26⅝
United Board & Carton	2.04b	(d)1.72g	(e)	8¾
U. S. Gypsum Co.	15.04	14.18	6.00	100¼
United Wallpaper	(d)0.10	0.59	(n)	3⅜
West Virginia Pulp & Paper	11.33c	9.70p	3.00	45¼

(a) 12 months to approximately 9/30/49
(b) Year ended 11/23/48
(c) Year ended 10/31/48
(d) Deficit
(e) Omitted dividend 2/4/49
(f) 11 months to 3/31/49
(g) 12 months to approximately 8/20/49
(h) Directors took no action on August, 1949 dividend—last payment 5/2/49
(i) 12 months to approximately 1/30/49
(j) 3 months to 6/30/49
(k) 12 months to approximately 6/12/49
(m) Directors took no action on July, 1949, dividend—last payment 1/10/49
(n) Last payment 25c, 9/16/47
(p) 12 months to approximately 7/31/49

(*) Earnings per combined preferred shares.

Dividends Declared

St. Regis Paper Co. has declared a regular quarterly dividend of 15 cents a share on its common stock, payable December 1 to holders of record November 4.

National Container Corp. has declared a regular quarterly dividend of ten cents per share on its common stock, payable December 10, to holders of record November 15.

Dixie Cup Co., has declared a quarterly dividend of 37½ cents per share on its common stock, payable December 20 to holders of record, December 5.

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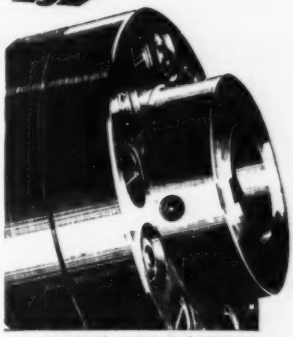

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AJAX FLEXIBLE COUPLING CO. INC.
19 ENGLISH ST., WESTFIELD, N.Y.

PRICES

The prices below reflect general market quotations applying to those standard grades in which the normal volume of business is being done.

NEW YORK

Delivered New York

Standard News, per ton—

Rolls, contract	$100.00/ —
Sheets	115.00/ —

F.o.b. Mills, Carload freight allowed, dock N. Y.

Kraft— per cwt., 40# base wgt.

Standard Wrapping Rolls	$6.50/ —
No. 1 Wrapping Rolls	7.25/ —
Standard Bag	6.00/ —

Tissues— per ream 24x36 (480) 10 lbs.

2500 lbs. or more

Wh. No. 1 Frd.	.$155.00/ —
Wh. No. 1 M. G.	150.00/ —
Wh. No. 1½	140.00/ —
Wh. No. 2	120.00/ —
Kraft Anti-Tar	1.37½/ —
Shrd. Wh. No. 1 per lb.	.11½/ —

Toilet— per case of 100 rolls—1 M sheets.

Unbleached 4½x4½	$5.75/ —
Bleached 4½x4½	6.95/ —
Bleached 4½x5	8.80/ —

Per Case of 50 rolls—2000 sheets

Unbleached 4½x4½	$5.75/ —
Bleached 4½x4½	6.80/ —

Per Case of 100 rolls—1000 sheets

Facial, 4½ x 5, 2 ply	$8.95/$9.45

Paper Towels—per case of 3750—Zone 1.

Wh. Jr. M'tif'd 9¼x9½	$5.25
Br. Sr. M'tif'd 10x12	3.60
Br. Jr. M'tif'd 9½x9¾	3.10
Br. Jr. Sgl. fold 10x10¾	3.15
Blchd. 7½ x 11, 24/25 rolls	$3.95/$6.25

Manila, per cwt.

No. 1 Jute Tag 40 lb., sheets*	$15.05/$17.50
Reg. Jute M.F. Manila, sheets*	13.50/ 15.50
Wrapping Manila	8.75/ 10.50
Printing Manila	10.00/ 11.00

* Less usual allowance for rolls.

Boards, per ton—

Filled News	$77.50/ —
Plain Chip	75.00/ —
Blchd. Mia. L-d. Chip*	92.50/ —
White Pat. coated*	110.00/
Kraft Liners 42 lb.	100.00/
Kraft Corr. .009	105.00/
Binders Boards	110.00/116.00

* Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

WORLD WOOD PULP MARKETS

Fourth Quarter Contract Prices, Per Short Air-Dry Ton

	Delivered, with varying freight allowances		On dock Atlantic Ports Full freight allowance		
	U. S.	Canadian	Swedish	Finnish	Norwegian
Groundwood	$65.00/ —	$65.00/ —			
Soda, Bleached	113.00/ —	113.00/ —		Competitive	
Sulphate, Bleached	118.00/126.00	126.00/ —	125.00/128.00		
Sulphate, Unbl'd North'n		82.50/105.00	82.50/ 85.00	with	
Sulphate, Unbl'd South'n	80.00/ 82.50				
Sulphite Blchd. (S'ftw'd)	118.00/ —	118.00/ —	118.00/ —	Domestic	Competitive
Sulphite, Blchd. (H'dw'd)	113.00/ —				
Sulphite, Unbleached	100.00/ —	100.00/ —	100.00/ —	Grades	
Sulphite, Unbl'd (Glassine)	105.00/ —	105.00/ —	104.00/105.00		

WASTE PAPER MARKET

Prices to Mills (Per Ton) F.o.b. Cars

	New York	Philadelphia	Boston	Chicago
	Oct. 22	Oct. 3	Oct. 21	Oct. 1
No. 1 Mixed Paper	$7.00/ $9.00	$7.00/ $9.00	$7.00/ —	$10.00/ —
Boxboard Cuts	7.00/ 9.00	6.00/ 7.00	— / 5.00	13.00/ —
Mill Wrappers	11.00/ 12.00	10.00/ 12.00	— / 9.00	12.00/ —
No. 1 News	10.00/ 11.00	9.00/ 10.00	9.00/ 10.50	16.00/ —
Over-issue News	14.00/ 15.00	12.00/ 14.00	8.00/ 10.50	19.00/ —
Corrugated Containers	15.00/ 17.00	17.00/ 18.00	14.50/ 15.50	20.00/ —
New Corrugated Cuts	18.00/ 20.00	20.00/ 23.00	16.00/ —	23.00/ —
Double Kraft Ld. Corr. Cuts	34.00/ 35.00	30.00/ 35.00	25.00/ —	35.00/ —
Used Kraft Bags	25.00/ 30.00	18.00/ 22.00	25.00/ 30.00	20.00/ —
No. 1 Brown Kraft Paper	25.00/ 30.00	25.00/ 30.00	30.00/ 35.00	20.00/ —
Super Resorted Br. Kraft	30.00/ 35.00	35.00/ —	40.00/ —	35.00/ —
New Br. Kraft Env. Cuts	65.00/ 70.00	60.00/ 65.00	60.00/ 65.00	55.00/ —
New Br. Kraft Cuts	40.00/ 45.00	55.00/ —	45.00/ —	50.00/ —
No. 1 Gdwd. Shvs.	15.00/ 20.00	15.00/ 20.00	25.00/ —	26.00/ —
White Newsblanks	50.00/ 55.00	40.00/ 45.00	— / 50.00	35.00/ —
No. 1 Flyleaf Shvs.	25.00/ 30.00	20.00/ 25.00	35.00/ 45.00	35.00/ —
No. 1 Soft Wht. Shvs.	75.00/ 80.00	60.00/ 65.00	70.00/ 80.00	55.00/ —
Super Soft Wht. Shvs.	90.00/100.00	65.00/ 70.00	80.00/ 90.00	60.00/ —
Hd. Wht. Shvs.	85.00/ 95.00	80.00/ 85.00	80.00/ 90.00	80.00/ —
Hd. Wht. Env. Cuts.	100.00/110.00	90.00/ 95.00	90.00/105.00	90.00/ —
New Manila Env. Cuts.	65.00/ 70.00	60.00/ 65.00	60.00/ 70.00	55.00/ —
Col. Tab Cards	30.00/ 35.00	20.00/ 25.00	35.00/ —	40.00/ —
Manila Tab Cards	65.00/ 70.00	60.00/ 65.00	75.00/ 80.00	65.00/ —
No. 1 Mixed Ledger	30.00/ 35.00	27.50/ 32.50	37.50/ —	40.00/ —
White Ledger	45.00/ 55.00	37.50/ 40.00	50.00/ 60.00	50.00/ —
Mixed Books & Mags.	7.00/ 8.00	9.00/ 10.00	12.00/ —	7.00/ —
No. 1 Rep'd Hvy. Books & Mags.	20.00/ 25.00	15.00/ 20.00	22.00/ 23.00	30.00/ —

The following prices are representative of the tributors' resale prices, all deliveries in Zone 1:

Rag Content Bonds and Ledgers—
White, 20 lb.

Bonds

	4 Ctns.
	per cwt.
100% Rag Ex. No. 1	$51.40/$53.90
100% Rag	44.55/ 46.15
75% Rag	33.90/ 35.40
50% Rag	28.10/ 29.55
25% Rag	24.85/ 26.80

Ledgers

	4 Ctns.
	per cwt.
100% Rag Ex. No. 1	$52.65/$54.55
100% Rag	45.65/ 46.40
75% Rag	35.15/ 36.10
50% Rag	29.40/ 30.05
25% Rag	26.15/ 26.80

Sulphite Bonds and Ledgers
White, 20 lb.

Bonds

	4 Ctns.
	per cwt.
No. 1	$17.50/ —
No. 2	16.65/ 16.75
No. 4	15.60/ 15.95

Ledgers

	4 Ctns.
	per cwt.
No. 1	$18.80/ —
No. 2	18.05/ —

White Book

Conversion Coated	Case
	per cwt.
No. 1	$19.75/$20.90
No. 2	19.25/ 19.65
No. 3	17.75/ 18.90
Machine Coated	
No. 1	16.40/ 16.65
No. 2	14.40/ 15.15
Uncoated	
No. 1 Antique (Watermarked)	16.40/ 17.90
Offset	15.15/ 16.65
A Grade S. F.	15.40/ —
A Grade S. C.	15.90/ 16.15
B Grade S. F.	14.90/ 15.15
B Grade S. C.	15.40/ 15.65

Twines

All Prices Nominal, F.o.b. Mill

(Soft Fiber)

Coarse Polished—India	.35½/ .36½
Fine Polished India	.41½/ .45
Unpolished—Paper Makers	.32¼/ .34½
Tube Rope	.33¼/ .35½
Wrapping	.36 / .38¼
Cotton	.58 / .60
Polished Cotton	.55 / —
(Hard Fiber)	
Mex. Sisal	.21 / .27
(American Hemp)	
Polished Hemp	.45 / .48
Unpolished	.35 / .37½

Rag Market

New Domestic Cotton Cuttings

(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.
White Shirt	$10.00/ $10.50
Unbleached Muslin	10.00/ 10.50
Light Silesias	7.00/ 7.50
White Back Blue Overalls	6.25/ 6.50
Blue Overalls	6.00/ 6.25
Fancy Shirt	4.50/ 5.00
Percales	5.50/ 6.00
Light Prints	5.50/ 6.00
No. 1 Washables	2.75/ 3.00
Bleachable Khaki	5.00/ 5.50
Unbleachable Khaki	4.50/ 5.00
Cottonades	4.25/ 4.75
Lt. Flannelettes	7.00/ 7.50
Men's Corduroy	3.50/ 4.00
Women's Corduroy	3.00/ 3.50

Old Domestic Cotton Rags

(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.
No. 1 Whites, Repacked	$4.25/ $4.75
No. 1 Whites, Miscellaneous	3.50/ 4.00
No. 2 Whites, Repacked	2.75/ 3.00

No. 2 Whites, Miscellaneous	2.00/	2.25
Cotton Pants & Overalls	2.50/	2.75
Thirds and Blues, Repacked	2.00/	2.25
No. 1 Roofing Rags	1.35/	1.45
No. 2 Roofing Rags	1.25/	1.35
No. 3 Jute Bagging	1.15/	1.20
No. 4 Brussels & brd. Bck'd crpts.	**.90/**	**1.00**
Roofing Bagging	**.80/**	**.95**

New Foreign Cotton Cuttings

(Prices to Dealer, F.o.b. Dock, N. Y.)

	Per 100 lbs.
New Dark Cuttings	prices are nominal
New Mixed Cuttings	
Light Silesias	
Light Flannelettes	
New White Cuttings	
New Unbleached Cuttings	
Fancy Shirt Cuttings	
Light Prints	
Bleachable Khaki, No. 1	
Unbl. Khaki, No. 1	

Old Foreign Rags

(Prices to Dealer, F.o.b. Dock, N. Y.)

	Per 100 lbs.
No. 1 White Cottons	prices are nominal
No. 2 White Cottons	
No. 3 White Cottons	
No. 4 White Cottons	
Extra Light Prints	
Old Light Prints	
Med. Light Prints	
Dutch Blue Cottons	
Checks and Blues	
Linsey Garments	
Dark Cottons, European	
Dark Cottons, Egyptian	
Old Shopperies	
New Shopperies	

Bagging

(Prices to Dealers, f.o.b. N. Y.)

	Per 100 lbs.
Foreign Gunny	$5.50/ $6.50
Domestic Gunny, No. 1	6.75/ 7.00
Heavy Wool Tares	6.50/ 7.00
No. 1 Scrap Bagging	4.75/ 5.00
Foreign Manila Rope	5.00/ 5.25
Domestic Manila Rope	5.00/ 5.25
Jute Strings	5.50/ 5.75
No. 1 Sisal Strings	4.50/ 4.75
Mixed Strings	1.15/ 1.30

PHILADELPHIA

New Domestic Cotton Cuttings

(Prices to Dealers, F.o.b. East'n Ship. Pt.)

	Per 100 lbs.
White Shirt	$10.00/$10.50
Fancy Shirts	4.50/ 5.00
Light Silesias	6.50/ 7.00
Unbleached Muslin	9.75/ 10.25
Light Prints	5.25/ 5.75
Washable No. 1	2.50/ 3.00
Blue Overall	5.75/ 6.25
Percales	5.50/ 6.00
Bleachable Khaki	4.50/ 5.00
Unbleachable Khaki	3.25/ 3.75
Men's Corduroy	3.75/ 4.25
Ladies' Corduroy	3.25/ 3.75
Cottonades	4.00/ 4.50

Old Domestic Cotton Rags

(Prices to Dealers, F.o.b. East'n Ship. Pt.)

	Per 100 lbs.
Mixed White	$2.75/ $3.50
Thirds and Blues Repacked	2.25/ 2.60
Cotton Pants & Overalls	2.25/ 2.50
No. 1 Roofing Stock	1.20/ 1.30
No. 2 Roofing Stock	1.10/ 1.15
Roofing Bagging	.90/ 1.00

Bagging

(Prices to Dealers, F.o.b. East'n Ship. Pt.)

	Per 100 lbs.
Old Manila Rope	$5.00/ $5.25
Foreign Gunny No. 1	6.75/ 7.00
Domestic Gunny, No. 1	6.75/ 7.00
Sisal Strings No. 1	3.00/ 3.50
No. 1 Scrap	4.00/ 4.50
No. 1 Jute Rope	5.50/ 6.00

BOSTON

Bagging

(F.o.b. Boston)

	Per 100 lbs.
Foreign Gunny	$5.50 /$6.00
Domestic Gunny	5.50 / 6.00
Domestic No. 1 Old Rope	5.00 / 5.25
Foreign No. 1 Old Rope	5.00 / 5.25
Mixed Strings	1.35 / —
Transmission Rope—Domestic	3.00 / 3.50
Jute Carpet Threads	— / 2.00
Bleachery Burlap	— / 9.00
Scrap Burlap—	
Foreign	4.50 / 5.00
Domestic	5.25 / 5.50
South America	5.00 / 5.50
Austr. Wool Pouches	7.00 / 7.50
New Zealand Wool Pouches	— / 4.00
New Burlap Cuttings	6.00 / 7.00
Heavy Baling Bagging	**7.50 / 8.00**
Paper Mill Bagging	— / 3.50

Domestic Rags (new)

(F.o.b. Boston)

	Per 100 lbs.
New Light Prints	5.75 / 6.00
Fancy Percales	6.25 / 6.50
White No. 1 Shirt	10.00 /10.75
Light Flannelettes	— / 7.00
Canton Flannels, Bleached	— / 9.00
Underwear Cutters, Bleached	10.75 /11.25
Underwear Cutters, Unbleached	10.00 /10.25
Blue Overalls	6.00 / 6.50
Soft Unbleached	9.75 /10.50
Blue Cheviots	6.00 / 6.50
Fancy Shirt	4.00 / 4.50
Washable	3.00 / 3.25
Khaki Cuttings	5.00 / 5.25
Men's Corduroy	4.50 / 5.00
Khaki Canvas	— / 5.50
B. V. D. Cuttings	10.00 /10.25

Domestic Rags (old)

(F.o.b. Boston)

	Per 100 lbs.
No. 1 Whites, Repacked	3.00 / 3.50
No. 1 Whites, Miscellaneous	2.50 / 3.00
Twos and Blues, Repacked	— / 2.00
Cotton Pants & Overalls	2.50 / 2.75
No. 1 Roofing Stock	.95 / 1.10
No. 2 Roofing Stock	.85 / 1.00
Roofing Bagging	.75 / .80

MATERIALS

Blanc Fixe

Prices firm. Supply adequate. Heavy demand. Currently quoted at $85.00 in bags, car lots, at works, 6 cents per pound, l.c.l., deld. By-product supply somewhat restricted. Quoted at $77.50 per ton, car lots, at works, 6 cents per pound, l.c.l., deld.

Bleaching Powder

Demand improved. Prices steady. Prices range from $4.50 to $5.00 per 100 pound drums, l.c.l., works.

Casein

Trading lags for lower prices. Argentine flush season underway. U. S. supply light. Current prices on processed acid precipitated grades 22½ to 23 cents, imported grades 17¾ to 18 cents, f.o.b. shipping point, car lots.

Caustic Soda

Demand heavier. Stocks adequate for prompt shipment. Contract prices for 1950 unchanged. Solid caustic is reported at $3.05 per cwt. flaked and ground is quoted at $3.45 per cwt., in 400 pound drums, $3.95 per cwt. in 100 pound drums —car lots, at works; liquid 50 percent in tank cars at $2.40 per cwt.; liquid 73 percent in tank cars at $2.50 per cwt., at works.

China Clay

Demand strong. Supply of domestic and imported ample. Domestic airfloated filler quoted at $10 per ton, water-washed $11.00, car lots, f.o.b. mines. Coating clay is $16 to $30. Imported clays repriced to $15.20 and $28.35 short tons, export warehouse.

Chlorine

Demand strong. Supply condition tighter. Prices firm at present levels for 1950 contracts. Currently quoted at $2.40 per cwt. in single unit tank cars; at $2.70 to $3.90 per cwt. in multi-tank cars, f.o.b., works.

Rosin

Demand spotty. Prices fluctuate daily. Buyers lag for lower prices. Gum rosin in drums per 100 pounds net in car lots, f.o.b. Savannah, B, $5.75; G, H, I, K, $6.58; wood rosin, per 100 lbs., car lots, f.o.b. Savannah; B, $4.25; FF, $5.50.

Rosin Size

Demand steady. Supply good. Seventy percent gum and pale wood grades, tank cars, $5.65 to $5.75 f.o.b. southern shipping point.

Salt Cake

Improved demand noted. Domestic quoted at $22.00/$24.00, f.o.b. shipping point, freight allowed to destination.

Soda Ash

Demand moderate. Supply tightens with labor troubles. Current prices, car lots per 100 pounds; light ash in bulk, $1.00; in paper bags, $1.25.

Starch, Corn

Demand strong. Supply ample. Prices guaranteed against rises to Oct. 31; sag 10 cents with corn price. Pearl grade currently quoted at $4.72 per 100 pounds; powdered starch at $4.83 per 100 pounds; white corn dextrine at $5.99 per 100 pounds; car lots, f.o.b. Chicago.

Starch, Potato

Heavy paper and textile demand tightens supply. Idaho high grade quoted at $7.25 cwt. l.c.l., ex N. Y. whse. New production quoted at $5.00 cwt., car lots, f.o.b. shipping point. Maine new production quoted at $5.00 cwt., car lots, f.o.b. Maine.

Sulphate of Alumina

Demand steady. Prices firm. Supply good. The commercial grades are quoted from $1.50 per 100 pounds, in bags, car lots, f.o.b. works. Iron free is $2.75 per 100 pounds in bags, car lots, at works.

Sulphur

Supply ample. Demand sustained at good level. Prices firm. Annual contracts are quoted at $18 per long ton, f.o.b. mines; $19.50, f.o.b. vessels, Gulf ports. Export price f.o.b. Gulf ports is $22.00 per long ton.

Talc

Demand continues far ahead of supply. Prices steady. Domestic grades are currently quoted at $23 to $28 per ton in 50-lb. paper sacks, car lots, f.o.b. mills; Canadian at $35 and up per ton.

Tapioca Flour

Supply liberal. Fair demand. Dextrinizable grades range from $9.00/$9.90 cwt. for superior high grades to $8.25/$8.75 cwt. for highs, on dock Atlantic and Gulf ports. Medium grades range from $7.00/$7.50 cwt. on dock, N. Y., and are tight in supply, prices firm.

Titanium Dioxide

Demand picks up. Supply ample. Prices firm. Anastase 19½c pound carload lots, 20c l.c.l., rutile, 21½c pound carload lots, 22½c l.c.l.; 50-pound bags, f.o.b. plant, actual freight allowed.

IMPORTS

IMPORTS AT NEW YORK

Week Ending Oct. 22

Newsprint

News Syndicate Co., Colabee, Baie Comeau, 7636 rolls.

Wallpaper

Meadows Wye & Co., Queen Elizabeth, Southampton, 1 cs.

Paper Napkins

H. W. Robinson & Co., Queen Elizabeth, Southampton, 3 cs.

H. W. Robinson & Co., Jutlandia, Copenhagen, 17 ctns.

H. W. Robinson & Co., Mauretania, Southampton, 13 cs.

Photo Paper

J. J. Gavin & Co., Mauretania, Southampton, 5 cs.

Cigarette Tipping Paper

Columbia Tobacco Co., Mauretania, Southampton, 1 cs.

Surface Coated Paper

Gevaert Co. of America, Black Gull, Antwerp, 48 cs.

Glassine Wrapping Paper

Judson Sheldon Division, Mauretania, Southampton, 2 cs.

Baryt Paper

W. Reimerdes, Black Gull, Bremen, 1 cs.

W. Reimerdes, Havmann, Bremen, 1 cs.

W. Reimerdes, American Clipper, Bremen, 1 pkge.

Filter Paper

H. Reeve Angel & Co., Inc., American Clipper, London, 14 cs.

J. E. Bernard & Co., Stockholm, Gothenburg, 7 cs.

Drawing Paper

H. Reeve Angel & Co., Inc., American Clipper, London, 3 cs.

Paperhangings

C. A. Haynes & Co., American Clipper, London, 39 bls.

Wallboard

Elof Hansson, Inc., Stockholm, Gothenburg, 1 cs.

Rags, Baggings, etc.

(———), Excalibur, Alexandria, 100 bls. hessian tares.

(———), Elizabeth Bakke, Bombay, 104 bls. waste jute rags.

Royal Manufacturing Co., Arnedyk, Antwerp, 59 bls. cotton waste.

Schwabach & Co., Black Gull, Antwerp, 94 bls. cotton waste.

J. J. Rozendaal, Black Gull, Antwerp, 53 bls. cotton waste.

New England Waste Co., Black Gull, Antwerp, 138 bls. cotton waste.

E. J. Keller Co., Inc., Ogna, Havre, 37 bls. gunny bagging, 17 bls. heavy burlaps, 8 bls. light burlaps.

W. N. Fuchs, Horda, Santos, 17 bls. mixed wool sweater clips, 6 bls. threads.

Manufacturers Trust Co., Emma Bakke, Naples, 186 bls. old bagging.

Chase National Bank, Emma Bakke, Naples, 29 bls. cotton waste.

Railway Supply & Manufacturing Co., Noordam, Rotterdam, 123 bls. cotton waste.

Midwest Waste Materials Co., Havmann, Antwerp, 78 bls. bagging, 395 bls. scrap bagging.

A. de Vries Trading Corp., Havmann, Antwerp, 67 bls. rags.

Loumaf Textile By-Products Co., Havmann, Rotterdam, 79 bls. old bagging.

National City Bank, Havmann, Rotterdam, 52 coils manila warps.

Midwest Waste Materials Co., Havmann, Bremen, 216 bls. old bagging.

Brandwein Mazur Co., Havmann, Bremen, 104 bls. bagging.

E. J. Lang, American Clipper, London, 53 bls. paperstock.

National City Bank, American Clipper, London, 123 bls. old bagging, 60 bls. old jute mail bags.

(———), Eucadia, Glasgow, 79 bls. bagging.

Manufacturers Trust Co., Fort Musquarro, London, 102 bls. jute bagging.

E. J. Keller Co., Inc., Pres. Buchanan, Bombay, 138 bls. old jute paperstock.

Brandwein Mazur Co., Pres. Buchanan, Bombay, 100 bls. cotton waste.

J. Eisenberg, Alf, Lindeberg, Buenos Aires, 32 bls. wool waste, 56 bls. wool rags.

Casein

American Cyanamid Co., Brazil, Buenos Aires, 1500 bags.

Crawford Keen Co., Brazil, Buenos Aires, 4020 bags (lactic).

Balfour Guthrie & Co., Brazil, Buenos Aires, 1000 bags (lactic).

The Borden Co., Chemical Division, Brazil, Buenos Aires, 2500 bags (ground lactic).

F. H. Paul & Stein Bros., Brazil, Buenos Aires, 1200 bags (ground lactic).

IMPORTS AT BOSTON

Week Ending Oct. 22

S. H. Waldstein Elizabeth Bakke, Bombay, 28 bls. cotton waste.

Leigh Textile Co., Black Gull, Antwerp, 156 bls. cotton waste.

IMPORTS AT PHILADELPHIA

Week Ending Oct. 22

Glant & Co., Elizabeth Bakke, Bombay, 145 bls. old jute rags.

Belmont Burlap Bag Co., American Clipper, London, 20 bls. waste bagging.

J. P. Fleissig, American Clipper, London, 5 bls. old cotton rags.

A. L. Diament & Co., American Press, Havre, 19 cs. wallpaper.

E. J. Keller Co., Inc., Executor, Genoa, 278 bls. jute rags.

The Borregaard Co., Inc., Executor, Trieste, 509 bls. woodpulp.

Gottesman & Co., S. S. Oklahoma, 1,000 bls. bleached kraft pulp.

IMPORTS AT NORFOLK

Week Ending Oct. 22

Manufacturers Trust Co., Emma Bakke, Naples, 82 bls. old bagging.

Castle & Overton, Inc., Emma Bakke, Genoa, 84 bls. bagging.

IMPORTS AT LOS ANGELES

Week Ending Oct. 22

National City Bank, Pres. Buchanan, Genoa, 120 bls. old bagging waste.

A. Toledo, Pres. Buchanan, Genoa, 100 rolls wrapping paper.

New England Waste Co., Pres. Buchanan, Genoa, 49 bls. cotton waste.

S. H. Waldstein, Pres. Buchanan, Bombay, 100 bls. cotton waste.

LITERATURE

Buhl Optical Co., Desk T-133, 1009 Beech avenue, Pittsburgh, Pa. Data sheets, "Buhl S-42 Magniprox" and "S-129 Microscope." Specifications, prices and operating information included.

Cochrane Corp., 17th street and Allegheny avenue, Philadelphia 32, Pa. Revised Catalog 3005, "Cochrane Deaerators." Combines the latest information on the importance of deaeration to feedwater chemistry with a complete description of modern equipment. In Canada, address Canadian General Electric Company, Ltd., 212 King street, West, Toronto, Ont.

Electric Tachometer Corp., 2218 Vine street, Philadelphia 3, Pa. Bulletin 492, "Portable M1200-F Electric Tachometer and Cutmeter." Describes equipment in detail.

Elgin Softener Corp., Elgin, Ill. Bulletin 610, "Elgin Water Conditioning." Provides up-to-date information on the design and application of water conditioning equipment: zeolite water softeners, water treating chemicals, water conditioning systems for boilers and processing, water softener modernization, zeolites, water filters, taste and odor removers and aerators.

Farrel-Birmingham Co., Inc., Ansonia, Conn. Booklet 114, "A Practical Guide to Care of Calenders and Calender Rolls." Contents: The Calender Stack; Chilled Iron Calender Rolls; Regular Inspection Is Very Important; Roll Troubles, Cures and Precautions; Grinding Calender Rolls; Lubrication of Calenders and Grinders."

Fischer & Porter Co., Hatboro, Pa. Catalog 50, "Ratomatic Instruments for Remote Indicating, Controlling, Totalizing." Describes a wide variety of primary and secondary flow instruments and control valves for all industries.

W. & L. E. Gurley, Troy, N. Y. Bulletin No. 1400, "Gurley Testing Instruments." Procedures for various methods of testing paper, paperboard, textiles, plastics and other sheet materials, and instruments for performing the tests are included.

O. C. Keckley Co., 400 West Madison street, Chicago 6, Ill. Bulletin, "Keckley Float Valves." Technical copy and specifications on No. 14 Single Seat, No. 15 Balanced Float Valves, and No. 20 Float Boxes with Control Valve.

Link-Belt Co., 307 North Michigan avenue, Chicago 1, Ill. Catalog and engineering data book, No. 2550, "Link-Ball and Roller Bearings." Points out important construction features of bearing models, gives list prices, weights, load ratings, and all necessary dimensions for the various standard models available.

Ledeen Mfg. Co., 1600 South San Pedro street, Los Angeles, 15, Calif. Bulletin CS 649. Describes the use of hydraulic cylinders for controlling large gate valves in paper mills or chemical plants. Actuating cylinders are illustrated and details given.

Mixing Equipment Co., Inc., 1024 Garson avenue, Rochester 9, N. Y. Bulletin, "Heavy-Duty 'Mixco' Turbine Agitator." Gives full details on new mixer drive which completely isolates shaft flexures from gears. Also contains details on various impeller types and specifications of complete unit.

Sandusky Foundry & Machine Co., Sandusky, Ohio. Bulletin 542, "Chief Sandusky Non-Ferrous Centrifugal Castings." Sales copy and specification sheet on suggested non-ferrous compositions available in Sandusky Centrifgual Castings.

U. S. Department of Commerce, Office of Technical Services, Washington 25, D. C. Report, "Wollastonite." Presents a series of prospective uses of a new industrial mineral, Wollastonite, as demonstrated by about two years of study. Possible applications were investigated in ceramics, chemicals, paints, paper, rubber, welding flux, asphalt tile, wall tile, pottery glaze, decorative-covering and abrasive-wheel materials. An introductory section deals with the physical and chemical properties of the mineral. The winning, milling and beneficiation of Wollastonite are discussed in a chapter based upon pilot-plant experience. A proposed commercial plant flow-sheet is included.

U. S. Department of Labor, Information and Compliance Branch, Wage and Hour and Public Contracts Divisions, Washington 25, D. C. Magazine-type Article, "McComb Announces Proposed Changes in Regulations (Part 541) for Exemption of 'White Collar' Employees Under Wage-Hour Law."

New York Quartermaster Purchasing Office, Department of the Army, 111 East 16th street, New York 3, N. Y. Pamphlet, "How to Do Business With the Quartermaster Corps."

U. S. Department of Commerce, Supt. of Documents, Washington 25, D. C. Book, "Survey of University Business and Economic Research Projects, 1947-48," Sixth edition, 240 pp., price $1.00. Designed for use by businessmen, business consultants, trade association executives, and Government officials who need to be informed concerning research being conducted at universities throughout the country. Lists 1,188 research projects in 105 colleges and universities, covering 24 subject fields.

U. S. Government Printing Office, Washington 25, D. C. Book, "Fourth Report to Congress of the Economic Cooperation Administration." 134 pp., price 35 cents.

West Virginia Pulp and Paper Co., 230 Park avenue, New York 17, N. Y. Booklet, "Inspirations for Printers 177."

Thomas C. Wilson, Inc., 21-11 44th avenue, Long Island City 1, N. Y. Bulletin 380, "Tube Expanders for High Pressure Boilers." Tube-expander accessories as well as various models of tube cleaners also are illustrated.

Worthington Pump and Machinery Corp., Publications Dept., Harrison, N. J. Bulletin, S-500-B45, "Worthington Dual Fuel Diesel." Introduces new improvements on dual fuel diesel engines.

Yale & Towne Manufacturing Co., 4530 Tacony avenue, Philadelphia 24, Pa. Bulletin P1159, "Little King Bench Scale Catalog." Enumerates functions for which the scale is advantageously used. Engineering drawings and tables give dimensions of 18 different Little King Scales. Data tables include platform size, gross capacity, dial and tare-beam capacities, and diameter of dial chart.

United States Pulp Producers Association, 122 East 42nd street, New York 17, N. Y. Book, "Wood Pulp Statistics, 1949 Edition." 199 pp., price $5.00 plus postage. A compilation of official data on wood pulp production, imports, exports, new supply and consumption. Records basic trends of supply and demand in principal countries of the world.

United Chromium, Inc., 51 East 42nd street, New York 17, N. Y. Bulletin, "Specialized Industrial Protective Coatings." Outlines essential facts on various formulations, and cites as evidence typical applications.

A Gunthard Co., Ennis, Tex. Catalog, "Homogeneous Lead-Lined Products." Provides drawings and complete specifications of the manufacturer's line of 45 and 90 degree elbows, reducing elbows, tees, crosses, reducers, return bends, blind flanges, companion flanges, Y branches and pipe spools. Also, bulletin, "Hy-Flow For Producing Hot Water in Large Quantities Instantly and Noiselessly." Sales copy with technical details on equipment for paper, textile, chemical and other industrial plants.

Insul-Mastic Corp. of America, Oliver building, Pittsburgh 22, Pa. Catalog, "Type D Insulation," No. 553. Sections devoted to Unique Composition of Type D; Application of Insul-Mastic; the "K" Factor; Condensation; Fire and Heat Resistance; Resistance to Acids and Alkalies; Waterproofing and Rustproofing; Some Specific Uses; Service Records.

Robins Conveyors Div., Hewitt-Robins, Inc., 270 Passaic avenue, N. J. Bulletin 113-A, "Robins Woven Wire Screen Cloth." Describes new Enamel-coated Screen Cloth, includes recommendations regarding best wire-diameter for specific services, and supplies tables on sizes of openings available for a given diameter of wire.

St. Helens Pulp and Paper Co., St. Helens, Oregon. Booklet, "Timber Management for Small Timberland Owners." A part of the company's program to aid in timber management, the booklet describes methods in protection of forests and harvesting of crops of timber.

PRODUCTION

Asphalt and Tar Roofing-Siding Products

WASHINGTON — July shipments of practically all types of asphalt and tar roofing and siding products were lower than June, the Bureau of the Census, Department of Commerce, reports. On an average work-day basis the only significant changes between June and July were declines of almost 15 percent in shipments of insulated brick siding and asphalt board products. (The average workday figures assume a normal work week of 5 days less 8 legal holidays during the year.)

The figures shown in this report include direct shipments (export and domestic) from the producing plants and from warehouses served by or oper-

Table I

Shipments of Asphalt and Tar Roofing and Siding Products in the United States, June and July 1949

Product	Quantity shipped (sales squares except-as noted)								
	July			June*			Cumulative total (January-July)		
	United States, total	Eastern Area	Western Area	United States, total	Eastern Area	Western Area	United States, total	Eastern Area	Western Area
Asphalt roofing, total	[1]4,335,232	3,736,515	598,717	4,595,569	4,025,112	570,457	27,657,067	23,669,170	3,987,897
Smooth-surfaced roll roofing and cap sheet, including sanded, talc, mica, and other fine material surfacing	1,006,424	834,377	172,047	977,479	840,530	136,949	7,030,733	5,885,960	1,144,773
Mineral-surfaced roll roofing and cap sheet, including 17" and 19" selvage edged	1,011,242	815,659	195,583	1,034,243	848,437	185,806	6,436,036	5,070,314	1,365,722
Strip shingles	2,027,768	1,824,873	202,895	2,237,868	2,022,597	215,271	12,380,211	11,046,299	1,333,912
Individual shingles	289,798	261,606	28,192	345,979	313,548	32,431	1,810,087	1,666,597	143,490
Asphalt sidings, total	[2]181,167	174,167	7,000	189,553	184,378	5,175	1,316,240	(d)	(d)
Roll form	139,380	(d)	(d)	139,958	(d)	(d)	1,103,145	(d)	(d)
Shingle form	41,787	(d)	(d)	49,595	(d)	(d)	213,095	(d)	(d)
Insulating brick siding, all types and finishes	[3]210,131	210,131	....	270,217	270,217	....	1,281,011	1,281,011	....
Asphalt board products; laminated asphalt felt and mastic core types, including corrugated and flat, with or without mineral surfacing (sq. ft.)	2,107,394	2,107,394	....	2,698,913	2,698,913	....	15,023,525	15,023,525	....
Saturated felts (tons), total	[4]43,321	37,464	5,857	43,153	37,812	5,341	257,049	222,532	34,517
Asphalt	36,812	30,955	5,857	37,018	31,677	5,341	218,303	183,786	34,517
Tar	6,509	6,509	....	6,135	6,135	....	38,746	38,746	....
Saturated sheathings and coated sheathings (tons), total	637	358	279	662	358	304	4,913	2,623	2,290

* Revised.
[4] Not shown separately, to avoid disclosing figures for individual companies.
[1] Estimates account for 14 percent of this figure.
[2] Estimates account for 6 percent of this figure.
[3] Estimates account for 8 percent of this figure.

Table II

Shipments of Specified Asphalt and Tar Roofing and Siding Products, by Geographic Division[1] July 1949

Product	Unit of measure	United States, total	Geographic division							
			New England	Middle Atlantic	East North Central	West North Central and Mountain	South Atlantic	East South Central	West South Central	Pacific
Asphalt roofing	Sales squares	[2]4,335,232	213,829	928,419	1,315,058	405,379	291,143	153,096	436,754	591,554
Asphalt sidings	Sales squares	[3]181,167	26,986	29,064	54,064	23,941	15,719	8,155	15,389	7,000
Saturated felts	Tons	[4]43,321	1,333	8,887	13,095	3,085	2,458	2,402	6,204	5,857

[1] Separate figures for each product for each division are shown wherever it is possible to do so without disclosing figures for individual companies.
[2] Estimates account for 14 percent of this figure.
[3] Estimates account for 6 percent of this figure.

ated in conjunction with these plants. Shipments of the listed products to other manufacturers of these products are not included in order to avoid duplication. Only those products having a base of dry or other organic binder are covered in this report. No data are included for products made with an asbestos base.

In Table I, statistics are shown for shipments from plants and warehouses in the Eastern and Western Areas of the United States. For the purpose of this report, the Western Area includes the States of Arizona, California, Idaho, Nevada, Oregon, Utah, and Washington. The Eastern Area comprises all other States. Table II presents data on shipments of three major types of products by Census Geographic Division. The statistics in these two tables are based on practically complete coverage of the industry. Estimates for a few nonreporting companies are included in the figures. Each total in which the estimate exceeds five percent is noted in the table and the percentage of estimate is given in a footnote to the table.

TRAFFIC . . . . .

NMFC Class No. 10 Hearings

By EDWIN CHESTER HASTINGS

Public hearings to consider proposed changes in rules, descriptions, ratings and minimum weights covering freight shipments of commodities listed in the National Motor Freight Classification #10 will be held in *Detroit*, Hotel Fort Shelby, 10 am, November 1; *Chicago*, Hotel Morrison, 10 am, November 3; *Washington*, 1424 Sixteenth Street N.W., 10 am, November 8; and *New York*, Hotel Governor Clinton, 10 am, November 10. These hearings resulted from proposals offered by carriers and shippers to the National Classification Board.

Paper men can make appointments to be heard in any of the cities mentioned if application is made to the NCB's secretary N. F. Behme, Jr., 1424—16th street, NW, Washington, D.C., for allotment of time to present facts that support or disagree with the proposals. The written arguments and/or exhibits furnished are requested to be submitted in *three complete copies*.

Close examination of the following proposals is important.

Item 13310—Paper or pulpboard boxes, bottles or cans, with or without metal tops or bottoms, not otherwise indexed, shipped set-up. The present requirement, when the commodity is shipped less-than-truckload, in packages, the item must be wrapped in fibreboard.

The motor carriers have proposed the classification change to read as follows: *Wrapped in two thicknesses of 60 pound kraft paper.* Test shipments have been made and the results will be made known at public hearings. Experimental or test shipments are allowed if the conditions of Rule 33, NMFC, are adhered to by the shipper before presenting his lading to the motor carrier. A permit must be secured from the chairman of the National Classification Board to use a container not authorized in the classification. The permit allows the shipper to use the container for only one purpose, that of experimental or testing. Without the permit, the freight charges are boosted to penalties of 20 percent on less-than-truckload and 10 percent on truckload.

Item 22390—Calcium Chloride, other than liquid, when shipped in moisture-proof bags in subject to comply with the conditions of Note 10, Item 22400. The commodity moves in burlap bags with double lining of waterproofed paper; in bags made of at least two plies of paper, containing no fibre other than rope stock or new chemical woodpulp, and fastened together with a waterproof bituminous composition and reinforced with jute or cotton yarn or cord imbedded in the bituminous composition; in five-ply multiple-wall paper bags having one ply waterproofed.

An addition has been proposed to Note 10 by shippers to cover the commodity when moved in four-ply multiple-wall paper bags, total basis weight not less than 210 pounds, one ply consisting of polyethylene coated kraft paper, net weight 100 pounds. Test shipments of this type of packing now are being made in accordance with the provisions of Rule 33 NMFC#10 and the results will be made known in the public hearings.

Item 22450—Calcium Phosphate now moves in double bags, 5-ply paper bags, cloth bags, bulk, barrels, boxes, pails, containers. Provision has been proposed by shippers for the chemical to also move in four-ply multiple-wall paper bags. Rule 33 tests are being made and the results will be made known at hearings.

The paper industry supplies products that are essential and their use in various fields is often accepted without thoughtful notice. However, the industry supplies a paper item that has proven of value and is now in demand. The bumper crops of the nation's farms have created a storage problem. Silos and storage bins for grain and feed for live stock early this year were overloaded. Where to put the coming harvest in storage became a major headache. To relieve the pressure, the government issued orders that grain only moved on permits and the railroads issued embargoes on cars. The critical situation forced most of grain to be left on the ground at the source or origin.

To meet this situation the paper industry supplied a product that may avert in the future the waste of grain. It is manufactured to supplement permanent silos and grain storage in times of 'bumper crops.' It is for 'one-time' use. The volume of movement warrants specific entry in the motor classification and the following proposal by shippers have been made to the Board for consideration in the public hearings—

The rail carriers have already taken the steps to provide ratings on shipments of silo material. In the rail's Consolidated Freight Classification #18 a new item (7360) will be effective November 5th, 1949 in Supplement 28 to the tariff. Described as follows—Silo Filler Strips, Asphalt Composition, shipped in bundles: The ratings provided are: Less-than-carload, Glasses R26 in the East, 4th Class in the South and West, this is 55 percent of the first class rail rate; Carload minimum weight 40,000 pounds, the ratings are Class 5 (35 percent) in the East, Class 7 (35 percent) in the South, Class 5 (37½ percent) in the West.

The item should be broadened to include the same descriptions as proposed for induction into the motor classification. This can be done by the same interests to the rail classification committee. Their main support can be the proof that volume shipments are now moving by motor truck and specific descriptions are proposed for the later classification, and the farm-dairy is considered as major in the agriculture field.

(New) Item 36515 Farm, dairy, garden, live stock, orchard or poultry equipment: Silos or Storage Bins, Kraft liner board or paper consisting of two or more sheets held together by a waterproofing compound, reinforced between the sheets with steel bands or strands of fibre, shipped knocked-down, in rolls.

The following ratings are proposed—Less-than-truckload, Class 3 (70 percent of the first class rate) in the East; Class 4 (50 percent) in the South and West. Truckload, Class 5 (30-32½ percent) in the East and West and South. Minimum TL weight 24,000 pounds.

Item 37710—Istle (Tampico) Fibres now shipped in bales or boxes subject to the following ratings: less-than-truckload, Class 3 (70 percent); truckload, Class 5 (30-32½ percent) in the East; Class 4 (55 percent) in the South and West. Truckload weight minimum 30,000 pounds.

The National Classification Board for 'justification purposes' propose to establish ratings properly related to density (Note the increase in ratings).

In bags or bales compressed to less than five pounds per cubic foot, Class 4tl, less-than-truckload or truckload, minimum weight, any quantity. The rating is rather an excessive increase, that is, when the rate jumps to four times the first class rate or 400 percent.

In bales compressed to five pounds or more but less than eight pounds per cubic foot, Class D1 (200 percent) for less-than-truckload; Class 1 (100 percent) for truckload, minimum weight factor 12,1.

The minimum weight factor is governed by Rule 34 of the motor classification. The rule has six tables and the minimum depends upon which table the trucker hauling the shipment will use. If his tariff does not specify any table, then Table F of Rule 34 applies.

Mwf factor 12,1 requires the following weights—Table A, 12,000 pounds; Table B, 10,800; C, 9,600; D, 8,400; E, 7,200; F, 6,000 pounds. In bales compressed to eight pounds or more but less than 12 pounds per cubic foot, Class 1 (100 percent) for less-than-truckload; Class 2 (85 percent) for truckload, mwf 20,1, under Table A this is 20,000 pounds; B, 18,000; C, 16,000; D, 14,000; E, 12,000; F, 10,000.

In bales compressed to 12 pounds or more but less than 15 pounds per cubic foot, Class 2 (85 percent) for less-than-truckload; Class 3 (70 percent) for truckload, mwf 24,1, in Table A this is 24,000; B, 21,600; C, 19,200; D, 16,800; E, 14,400; F, 12,000.

In bales compressed to 15 pounds or more per cubic foot, Class 3 (70 percent) for less-than-truckload; Class 4 (50 percent) for truckload, mwf 24,5, under Table A this is 24,000 pounds; B, C, and E, the Same; F, 20,000.

Item 76410—Paper Articles, doilies, facial tissues, handkerchiefs, napkins, neck strips, table cloths when shipped in boxes or crates, truckload or less-than-truckload, the present rating is Class 2 (85 percent).

As justification due to volume of movement, shippers base proprosed changes are warranted to decrease the rating on truckloads to 30-32½ percent, the required minimum weight 24,000.

Shelf decorating paper now has a rating of Class 4 (50 percent) (on truckloads) and shippers have proposed a decrease in the truckload rating of 45 percent wherein the commodity comes under the following description—Shelf decorating or edging paper, resin impregnated and coated with resin, not laminated, shipped in boxes.

Even though the waste materials market is overstocked and orders are nil to move the product to users, it seems a bad time to increase freight rates. The Classification Board, however, regardless of the present condition proposes to do this on rag waste materials. If no opposition is offered the same will be tried on waste paper.

The Classification Board proposes to change

the description of Cellulose Products in some cases to rename the items such as Plastic Film Products.

Makers of paperboard or pulpboard picture frames may be interested to know that their competitors, those making metal frames, have requested the Board for the same ratings to apply on the latter's products.

The carriers propose to have a new section added to Rule 6. The rule relates to marking or tagging shipments. For improper marking they propose as penalties to increase the freight charges 20 percent.

Simplifying Damage Claims

PORTLAND, Ore. — To aid shippers and receivers in securing claim collection for damaged goods, the Rapid Transfer & Storage Co. offers shippers and receivers, free, a photographic record of every boxcar interior it handles. As the boxcar door is opened

Camera records condition on arrival.

a photo is taken showing the condition of the car as loaded. As unloading progresses merchandise which has been damaged in shipment is also photographed. This photo shows exactly what damage has been done, the extent of damage, and quite often the cause of damage, thus facilitating the making of claims equitably.

Avoid Needless Shipping Costs

Paper items are often rated 55 percent of the first class rate for less-than-carload; for carload, 27½ percent. The cheaper rate depends upon the lading weighing not less than the minimum specified in the carrier's tariff or the Exceptions to the Classification.

The instructions of Rule 15 of the classification should be closely followed for the reason there are many less-than-carload shipments entitled to the cheaper carload rate. The rule states "*the charge for a LCL shipment must not exceed the charge for a minimum carload of the same freight at CL rate: the charge for a car fully loaded must not exceed the charge for the same lot of freight if taken as a LCL shipment. If a shipment tendered as LCL freight and loaded by carriers or transported and unloaded by carriers is found to be subject to the carload rate, and the carriers' tariffs do not provide that cost of loading or unloading is included in the CL rate, a charge of 5c (rail traffic) 3¼c (motor traffic) per 100 pounds will be made for such loading and a like charge for unloading, such charge to be based upon actual weight of shipment. The CL minimum weight to be applied, on such shipment will be that applicable to car of size required for shipment in the condition tendered for transportation.*"

Arkansas and Tennessee had a 3c rate on all traffic intrastate, Alabama had 3¼c, but these have been increased to the above scale of 5c and 3¼c. Also, Arkansas and Tennessee had minimum charges for L.C.L., shipments of 55c; Alabama, 58c. Carload minimum charges in the same states were $16.50 and $17.49, the application on traffic moving within the state. On rail shipments the L.C.L., rate has been increased to $1 and carload $20. The increases are listed in Supplement 28 to the Consolidated Freight Classification, effective November 5, 1949.

An earlier issue of *Paper Trade Journal* reported the intended change in Rule 34 of the rail classification pertaining to "minimum carload weights of shipments in closed cars." The change was a rewording of the rule's Section 2 (a). What direct influence a trade paper has in an industry is impossible to know. Important information with news value is constantly published. If the matter requires immediate attention and nothing is done to correct what effects the industry's interest, then an opportunity is lost even though the trade paper tried to do a good job. In the case of Rule 34, something was done, for the "change" was docketed for Investigation and Suspension by the Interstate Commerce Commission. As a result, the Commission on October 14 ordered the "change" cancelled and Rule 34, Section 2 (a) reads as follows: "If carrier is unable to furnish closed car of length ordered and furnishes longer car, minimum weight shall be that fixed for car ordered except that when capacity of car is used, minimum weight shall be that fixed for car furnished." Notation required on Bill of Lading: the car length ordered by the shipper and the length furnished by the carrier.

Rule 7 of the Canadian Freight Classification No. 19, Supplement 14, Section 1 (d) is worded identically. It is of interest to observe Note 4, Section 2 of Rule 7 that became effective September 1, 1949, on Interstate Traffic in Supplement 19, to wit: "When a shipper orders an open car and a closed car is furnished in lieu thereof, *the minimum weight applicable will be that for the car furnished.*"

The folly of this condition may be noted in an example: A shipper of pulp orders a 40'6" open car, his lading weighs 30,000 pounds. The classification minimum weight (Supplement

Silicone News

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"abhesive"

KEEPS RUBBER, ASPHALT AND PRESSURE SENSITIVE TAPES FROM STICKING TO PAPER

We've coined a word to describe the remarkable release characteristic imparted to paper by DC 1107. This invisible silicone coating developed by Dow Corning makes paper completely "abhesive" to materials like rubber, asphalt and adhesive tapes that normally stick to any surface.

An emulsion or a solvent solution of DC 1107 is easily applied by dip or roller coating and quickly cured by heating for 30-60 seconds at 250°F. Experimental mill runs indicate that there is a large market for DC 1107 treated, "abhesive" paper as inter-leaving sheets for uncured rubber, camelback, tire tube patches, pressure sensitive tapes of all kinds and for bag stock to be used in shipping such sticky materials as tar and asphalt.

MAKES PAPER WATER REPELLENT

prevents initial wetting, maintains initial tensile strength and tear resistance for a relatively long period of time in contact with water.

For more information about DC 1107 phone our nearest branch office or write for Data Sheet AB-10

DOW CORNING CORPORATION
MIDLAND, MICHIGAN

Atlanta • Chicago • Cleveland • Dallas
Los Angeles • New York
In Canada: Fiberglas Canada, Ltd., Toronto
In England: Albright and Wilson, Ltd., London

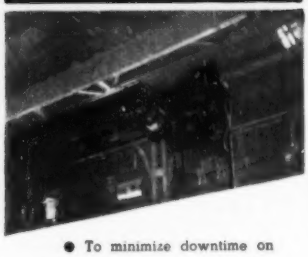
FIRST in Silicones

Dow Corning

Modern Handling System

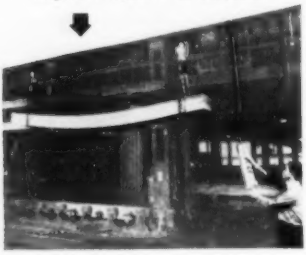
Reduces

MACHINE DOWNTIME



● To minimize downtime on a milling machine, finished flat stock had to be lifted out of the way quickly and easily. The customer, a prominent steel company, called in a Reading Engineer. A custom-built Hoist and Crane, with an extra long lift and push button control of *all* motions, was engineered and installed. Now handling of finished stock is no longer a "time-waster."

This method of engineering special handling systems, *at no extra engineering cost,* is standard practice with Reading. For full details on how you can use it to reduce handling costs and modernize operations, call in a Reading Engineer. There is no obligation.



READING CHAIN & BLOCK CORPORATION
2113 ADAMS ST., READING, PA.
Chain Hoists • Electric Hoists
Overhead Traveling Cranes

READING HOISTS

19) for the load is 33,600 pounds. The carrier fills the shipper's order with a car (closed) over 50'6". In Supplement 14 the minimum weight will be *60,000 pounds.*

To avert excessive charges (and legal too), the shipper can refuse to accept and wait until the carrier delivers the length ordered. This may not solve certain problems, for "waits" can be expensive to both the shipper and customer, but it is an alternative, in many instances.

Truck Tank Transit Permit Granted

NEENAH, Wis. — The Wisconsin Public Service Commission on October 3 granted permission to Kampo Milk Transit, motor carrier, to carry liquid chemicals in tank vehicles from Appleton, Kimberly, Nekoosa, Niagara and Port Edwards to Neenah, and between Kimberly and Niagara, all for the Kimberly-Clark Corp., Neenah.

OBITUARIES . . . .

Ernest C. Ropes, 72, former Chief of the Russian Unit of the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce, died at his home in Stratford, Conn., on October 18, following a brief illness. Mr. Ropes, at one time was associated with the paper and pulp industry. Surviving are his widow, Mrs. Nathalie Wierum Ropes, and a son, John C. Ropes.

Peter Pechnie, 53, hoist engineer at the Howard Smith Paper Mills, Cornwall, Ont., died from injuries sustained when he either fell or leaped from the cab of the shovel when the machine started to topple on October 18. He is survived by his widow and three daughters.

John C. Monty, 63, general manager of the Canadian International Paper Co. mill, Gatineau, Que., died at his home in Ottawa on October 19, following a year's illness. Surviving are his widow, Mrs. Loies Thiverge; and a sister, Mrs. B. F. Lewis.

Harry S. Bridgman, 79, retired purchasing agent of the Valley Paper Co., Holyoke, Mass., died at his home in Springfield, Mass., on October 20. Mr. Bridgman was also clerk (secretary) of Valley at the time of his retirement four years ago.

Adelard Gaumond, 85, formerly on the staff of the E. B. Eddy Co., Ottawa, Ont., died at his home in that city on October 17 after a brief illness. He is survived by one son and three daughters.

Henry P. Madsen, 50, president and general manager of the Appleton Machine Co., Appleton, Wis., died of a heart attack on a local golf course on October 13. His widow and a daughter survive him.

AMERICAN PAPER AND PULP ASSOCIATION'S PRODUCTION RATIO REPORT*

(Production as per cent of six day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1949		Corresponding Weeks—1948	
Sept. 10	74.1	Sept. 11	78.1
Sept. 17	94.6	Sept. 18	97.5
Sept. 24	95.9	Sept. 25	99.8
Oct. 1	97.2	Oct. 2	99.6
Oct. 8 (Revised)	96.6	Oct. 9	100.3
Oct. 15	99.6	Oct. 16	101.8

COMPARATIVE MONTHLY SUMMARIES

1948						1949	
		May	100.5	Oct.	99.1		
Jan.	100.1	June	95.7	Nov.	97.1	Jan.	94.6
Feb.	99.8	July	85.3	Dec.	87.1	Feb.	92.8
Mar.	100.8	Aug.	96.8			Mar.	89.1
Apr.	100.8	Sept.	91.8	Year Avg.	96.2	Apr.	85.1
						May	82.7
						June	78.6
						July	‡72.2
						Aug.	‡88.0
						Sept.	‡90.3

‡ Preliminary.

COMPARATIVE YEARLY SUMMARIES

	1942	1943	1944	1945	1946	1947	1948	1949
Year to Date	92.0	88.3	88.2	88.8	100.8	103.8	97.0	86.8
Year Average	90.4	87.8	88.1	89.4	101.1	104.3	96.2	

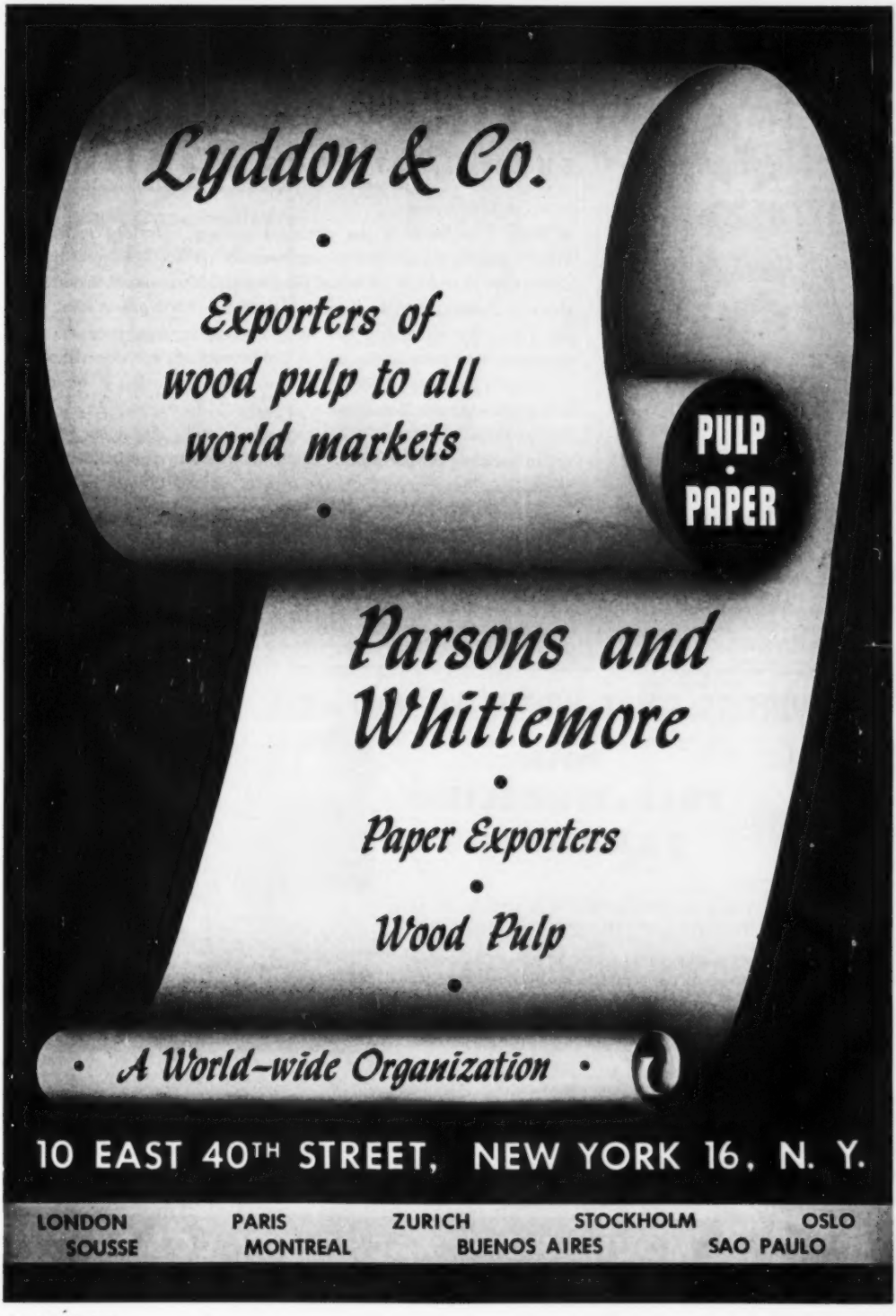
PAPERBOARD OPERATING RATIOS†

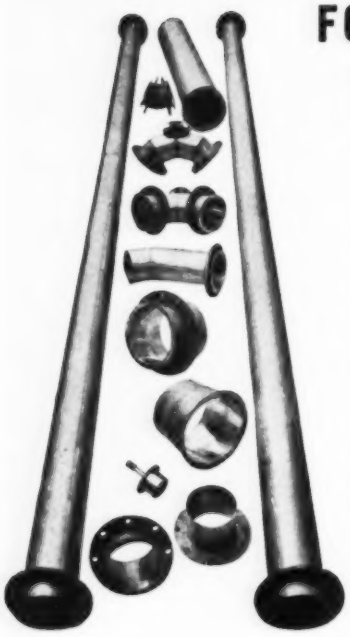
Current Weeks—1949		Corresponding Weeks—1948	
Sept. 10	72	Sept. 11	76
Sept. 17	92	Sept. 18	97
Sept. 24	91	Sept. 25	94
Oct. 1	94	Oct. 2	96
Oct. 8	92	Oct. 9	96
Oct. 15	94	Oct. 16	97

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1948	99	100	102	102	100	94	81	92	91	96	94	84	95
1949	88	85	79	79	78	75	64	86	87				

* All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Association.


Lyddon & Co.
Exporters of wood pulp to all world markets
PULP
PAPER
Parsons and Whittemore
Paper Exporters
Wood Pulp
A World-wide Organization
10 EAST 40TH STREET, NEW YORK 16, N. Y.
LONDON PARIS ZURICH STOCKHOLM OSLO
SOUSSE MONTREAL BUENOS AIRES SAO PAULO



FOR LONGER, COST-SAVING SERVICE ... WELDCO

TUBING, FITTINGS AND PIPING

● Many companies in the chemical process industries specify Weldco tubing, fittings, and piping because Weldco is easy to fabricate, easy to weld, is 100% rust-proof and highly resistant to corrosion and chemical attack. Available in Monel and stainless steel, it has a smooth inside finish, light weight, and exceptional strength... toughness that permits the use of lighter sections for stock lines.

Shown here are Weldco stock lines of 8-5/8" O.D. x 16 gauge wall thickness, with Van Stone type joints . . . tubing and fittings—now in use in one of the South's largest pulp and paper mills. Why not investigate Weldco's cost-cutting, long-service possibilities for your plant? Send today for a free copy of the new Weldco booklet.

THE YOUNGSTOWN WELDING & ENGINEERING CO.
3730 OAKWOOD AVE. YOUNGSTOWN 9, OHIO

CONVERTERS SOLVE WRINKLING AND CREASING PROBLEMS

Mount Hope

WITH FREE-WHEELING EXPANDERS

"We have at least one Mount Hope Expander in use on *every* machine in our plant, and are *completely satisfied* with their performance!"

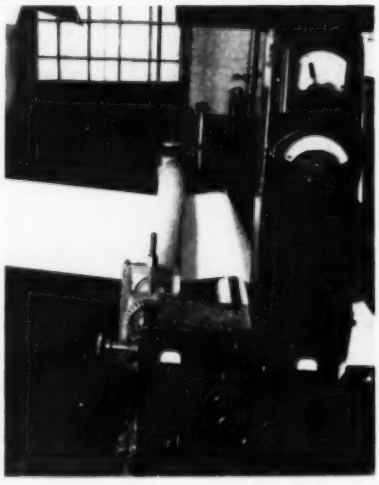
This report by one of the largest N. E. Paper Converting Companies is typical of the complete satisfaction expressed everywhere.

Mount Hope Expanders are used on all types of machines to eliminate wrinkles and creases and to improve paper quality.

Equally effective on dry or wet paper. They eliminate wrinkles and baggy edges that cause out of register printing on offset and lithographic presses.

It will pay you to investigate the advantages of Mount Hope Expanders in your plant.

A Mount Hope Engineer is at your service without obligation



Installation of Mount Hope Expander at Appleton Coated Paper Co. — prevents welts and wrinkles on Kohler Rewind.

Send today for BULLETIN EP-X

MOUNT HOPE MACHINERY COMPANY
42 Adams St., Taunton, Mass.

CLEARING HOUSE

HELP WANTED

Grade A Opportunity for TOUR BOSS

Man with background and experience which will qualify him as a Tour Boss in a roofing felt mill in the South. Please provide full information. Your application for this position will be treated confidentially.

Address Box 49-510, care Paper Trade Journal. O-27

SALESMEN WANTED

Resident salesmen wanted to represent large eastern mill manufacturing comprehensive line of toilet tissue, paper napkins, paper towels and many other specialty items that are sold in volume to paper jobbers, wholesale grocers and chain stores. Write giving all details regarding experience, salary requirements and other information that will be helpful in determining qualifications. Territories open in Pennsylvania, Indiana, Michigan, Illinois, Wisconsin, Iowa, Missouri and Kentucky. Write Box 49-515, care Paper Trade Journal. N-17

ENGINEER FOR SALES SERVICE of pulp treating machinery newly introduced to the trade. Must have working knowledge of pulp and paper machinery and processes, be capable of supervising the installation and operation of special equipment, and be willing to travel. Should have about eight years actual experience in pulp and paper laboratories and operations. Age preferable 30 to 36. Applicant will be expected to possess attitude and talents which will enable him to make contributions to and work smoothly with a functional group devoted to development and sales of paper mill machinery. Correspondence held confidential. Address:

CURLATOR CORPORATION
565 Blossom Road,
Rochester 10, New York N-17

Wanted: Laboratory technician and chemist for Specialty Coated Paper Mill. Experience with dyestuffs, pigments, adhesives, plastic coatings, etc., essential. Furnish record of previous employment, salary expected etc. Address Box 49-521 care Paper Trade Journal. N-10

HELP WANTED

MEN WANTED
Positions Open

Superintendent large mill making pulp as well as better grades of paper; controller; expert on waste paper and paper stock for use in pulp and paper mills; chemical engineer for box board mill; mechanical engineers; master mechanics; paper and pulp mill chemist; bag salesman; four bosses Cylinder machines, board, roofing and flooring felt; machine tenders; back tenders.
We invite correspondence (Confidential) with mills seeking executives and with executives seeking new positions.

CHARLES P. RAYMOND SERVICES, Inc.
294 Washington Street, Boston, Mass.
O-27

MAN WHO KNOWS FIBRE and stock preparation processes to handle sales correspondence with paper and pulp mills regarding process and machinery newly introduced to the trade. Should have about ten years experience in mill laboratories or operations, preferably several different mills. General understanding of mill problems is essential. Sales flare with letter writing aptitude is required. Age preferably 30 to 36. Applicant will be expected to possess attitude and talents which will enable him to make contributions to and work smoothly with a functional group devoted to development and sales of paper mill machinery. Correspondence held confidential. Address:

CURLATOR CORPORATION
565 Blossom Road
Rochester 10, New York N-10

ENGINEER WHO KNOWS FIBRE and stock preparation processes and has inventive flare with about ten years of experience with paper and pulp mill machinery as a designer and promoter of new developments. Age preferably 30 to 36. Applicant will be expected to possess attitude and talents which will enable him to make contributions to and work smoothly with a functional group devoted to development and sales of paper mill machinery. Correspondence held confidential. Address:

CONSOLIDATED MACHINE TOOL CORP.
565 Blossom Road, Rochester 10, New York
N-10

Wanted—Competent Engineer to head up Maintenance and Engineering Department of small progressive specialty converting plant. Salary open. Excellent opportunity for right man. All replies will be held in confidence. Address Box 49-506 care Paper Trade Journal. O-27

HELP WANTED

Plant Engineer for two machine mill, one straight fourdrinier and one cylinder machine. Now making .009 corrugating medium on the fourdrinier also kraft and light weight specialties etc; on cylinder boxboard lath papers. (For Gypsum Companies), paper board specialties, etc., using waste paper only, must have paper making experience, also work with and train millwrights, layout, planning, design, installation, supervision, coordination, maintenance, etc., must be thoroughly versed in electric, steam and water power, apply Wallkoomsac Paper Mills Incorporated P.O. North Hoosick, New York, Attention James J. "Shorty" Andrews. TF

CHEMIST

Our Paperboard Mill, specializing in the manufacture of Folding Grades, is seeking and experienced Chemist to assist in controlling formulae and improving our quality. An exceptional opportunity is offered to the right man. In your reply give complete background of experience and your desired compensation. Address Box 49-507, care Paper Trade Journal. N-3

SALARIED POSITIONS $3,500—$25,000

If you are considering a new connection communicate with the undersigned. We offer the original personal employment service (39 years recognized standing and reputation). The procedure, of highest ethical standards, is individualized to your personal requirements and develops avertures without initiative on your part. Your identity covered and present position protected. Send only name and address for details.

R. W. BIXBY, INC.
117 Dun Bldg., Buffalo 2, N. Y.
TF

WANTED — DE-INKING SUPERINTENDENT—Experienced in installation and operation of complete de-inking plant from beginning to end. Complete resume and salary desired please. Address Box 49-493 care Paper Trade Journal. N-3

WORKING MASTER MECHANIC — For one machine Folding Board Mill. Good pay. Steady work. Outline full qualificatoins and experience. Address Box 49-500 care Paper Trade Journal. N-10

POTDEVIN SACK MACHINE ADJUSTER —Making satchel bottom potato sacks, in small plant near Newark, New Jersey. Write giving experience, salary expected. Address Box 49-497 care Paper Trade Journal. O-27

MACHINE TENDER—Fully experienced on all folding grades. Good steady job with excellent opportunity in one machine mill. Address Box 49-517 care Paper Trade Journal. N-17

RATES FOR CLASSIFIED ADVERTISING

HELP WANTED—10c a word. Double rate for heavy face type. Minimum charge $2.50.

SITUATIONS WANTED—10c a word, double rate for heavy face type. Minimum charge $2.50. If repeated ½ rate will be charged for each consecutive repetition.

FOR SALE—10c a word. Double rate for heavy face type. Minimum charge $2.50.

WANTED—10c a word. Double rate for heavy face type. Minimum charge $2.50.

OPPORTUNITIES—10c a word Double rate for heavy face type. Minimum charge $2.50.

Classified advertising space may also be purchased at $5.00 per single column inch. All classified advertisements are payable in advance. If box number is used—70 cents additional.

Address replies to advertisements appearing under Box Numbers in care of PAPER TRADE JOURNAL, 15 West 47th Street, New York 19, N. Y.

HELP WANTED

WANTED CONVERTING FOREMAN — Familiar all phases converting toilet tissue, towels, napkins. Northern New York Mill. Full resume please. Address Box 49-514 care Paper Trade Journal. N-17

WANTED—Highly capable Engineer with broad experience and training for supervision, design, specifications and reports on paper mill and other industrial work, including power plants. Address Box 49-509 care Paper Trade Journal. O-27

SITUATIONS WANTED

ASSISTANT TO COMPANY OFFICER

5 years of successful specialization of development of good labor relations and control of Union labor. Experienced in old paper stock and integrated paper mills as well as coating mill and converting plant. Thorough and practical Industrial Engineering background.

Willing to locate anywhere in U. S. with progressive concern of intermediate size in paper industry or allied trades.

If opportunity for advancement commensurate with results obtained is available, will start for $7500. Availability two to three weeks following interview. Address Box 49-528 care Paper Trade Journal. O-27

Paper executive located in Chicago and in business. Specializing in all types of papers for years. Manufacturing, buying and selling have been ordered to a different climate will accept a proposition.

Box 49-522, care Paper Trade Journal. O-27

EUROPEAN REPRESENTATIVE — Ex U. S. Mil. Gov't. Official, recently returned from Europe, seeks connection with high grade concern as European Representative. College graduate and sound commercial background of 17 years with largest wholesale paper merchandising concern on Pacific Coast. Wide experience throughout Europe during past six years including all phases of transportation. Fluent knowledge French, German, Dutch. Good appearance. Excellent personality. Single. Address Box 49-490 care Paper Trade Journal. O-27

ACCOUNTANT invites correspondence, desires change. 20 years paper industry. Capable serving as Comptroller-Chief Acc., etc. Know how to install and control costs and administer budgets. Address Box 49-491 care Paper Trade Journal. N-3

COATED PAPER CHEMIST—25 years experience, color work, coating dept., production. Past two years resin emulsion coatings. Desire position as coating and converting assistant superintendent or superintendent. Excellent health, progressive, references. Address Box 49-524 care Paper Trade Journal. N-17

SITUATIONS WANTED

TECHNICAL DIRECTOR—Especially skilled in process cost reduction, desires to apply 18 years experience in paper and paper treatment for a progressive management. Midwest location preferred. Address Box 49-512 care Paper Trade Journal. N-3

MECHANICAL ENGINEER—With very extensive experience in the pulp, paper and board industry over 28 year period. Desires connection with moderate sized organization planning changes to improve capacity and quality. Qualified for power, maintenance, design, construction and production supervision. Address Box 49-488 care Paper Trade Journal. N-3

ASSISTANT SUPERINTENDENT or Tour Boss. Desires to make change. Age 43. 25 years experience on high grade box board. Knows beater formulas thoroughly. Cost and quality conscious. A-1 references. Address Box 49-504 care Paper Trade Journal. O-27

JUNIOR EXECUTIVE — Young forestry graduate with highly successful 15 year record in wood management, production and preparation, will give unselfishly of time and ability for opportunity to assist top executive in paper manufacturing and general administrative duties. Address Box 49-503 care Paper Trade Journal. O-27

ENGINEER—25 years experience developing pulp and paper mill machinery. Now employed as head of engineering department. Good personality, married, excellent reference. Replies held confidential. Address Box 49-495 care Paper Trade Journal. N-10

FOR SALE

BALER FOR SALE

Offered for prompt delivery!

Model 145 Economy all-steel heavy duty Power Baler, down-stroke type, 350 lbs. capacity, with 5 H.P. A.C. motor. Rebuilt like new.

Thomas W. Hall Company, Inc.
120 West 42nd St., New York 18

O-27

GOOD VALUES—NEW & USED

60" Hamblet Sheeter with Erie layboy and 10 roll backstand, double deck, with shafts and chucks, also 4 sets of slitters. A fine value.

34" Camachine No. 6 Slitter.

32" Hobbs shear cut Slitter, rebuilt like new.

39" Chandler & Price Automatic Power Paper Cutter.

New 44" National Auto. Power Cutters and 36" National Hydraulics.

Baling Presses, both hand and power.

Motors, both A.C. & D.C. for any purpose.

THOMAS W. HALL COMPANY, Inc.
120 West 42nd St., New York 18
(Plant at Stamford, Conn.) TF

FOR SALE

MAKE OFFER

1—Paper Mill located Midwest with 156" Fourdrinier Machine, Suction Roll, Two Main Presses, Forty (40) Dryers 48" x 156" with top and bottom dryer felts. Eight Roll Stack Calenders, Reels, Winder, Driven by 250 H.P. Terry Turbine. NEW boilers, Machine and Auxilliary Equipment fully rebuilt in 1948 to make .009 board. Ready for immediate operation or will dismantle and ship. Your offer will be given every consideration. Here is a good buy for aggressive operator. Inspection invited as this mill will be sold promptly if reasonable offer is made. Terms can be arranged.

Address Box 49-513, care Paper Trade Journal. O-27

FOR SALE

12—Practically new—Louis Allis, 50 hp, 580 rpm, 3 phase, 60 cycle, 440 volts, type RX—squirrel cage, totally enclosed fan cooled motors.
2—New—6" class A-2 I—bronze fitted centrifugal stock pumps.
2—6" Shartle rising stem gate valves.
2—16" 3-way Shartle motor operated stock valves.
1—12" x 8" Black-Clawson fan pump.
5—600# cast iron tub beaters.
1—1500# cast iron tub beater.
1—3000# cast iron tub beater.
1—12 x 20 Shartle-Miami triplex plunger pump.
1—8 x 10 Shartle-Miami Duplex plunger pump.

SPECIAL

1—Dryer section consisting of 15—48" x 74" B/C deck B/C dryer frames, bronze I aed bearings, dryers 6—48" x 84" bolted head dryers, double bottom felt only.

SHARTLE BROTHERS MACHINE COMPANY
MIDDLETOWN, OHIO

O-27

"For Sale or long term lease Paper Mill located in Southeastern U. S. one 80" Fourdrinier Paper Machine 72" trim and auxiliaries including four beaters, two jordans, one refiner, two watertube boilers. Suitable for Manifold, 9 point, or similar light weight papers, capacity 12 to 18 tons per 24 hours. Buildings and land included or will sell equipment only. Available at once for immediate operation. Address Box No. 49-519 Care Paper Trade Journal."
O-27

FOR SALE

One 93" trim board machine, thirty tons per twenty four hours.

Four cylinder moulds 36 x 104", cast iron vat ends, 10" dia. cores. 1 spare mould 36 x 104". Two primary presses, 11" and 12" dia. rolls. Three main presses, bottom roll rubber covered 18 x 100". Top roll brass 22 x 101". Black & Clawson heavy swing arm housings.

11 dryers 42 x 98" triple deck.

Breaker stack with 18" dia. rolls.

27 Dryers 42 x 98", triple deck, Black & Clawson heavy frame. Pressure thirty-five lbs.

Two stacks of calenders, eight roll, box frame, with bottom 22", 7 16" dia. Two rolls each stack bored for steam. Lift screws, levers and weights.

Three bowl Black & Clawson reel with drums 14 x 98".

Black & Clawson duplex 96" cutter with two No. 4 Reeves drives.

Three shaft Black & Clawson winder.

Variable line shaft and auxiliary equipment.

FRANK H. DAVIS COMPANY, 175 Richdale Avenue, Cambridge, Massachusetts
Telephone Trowbridge 6-0366

FOR SALE

1—2-A Hudson-Sharp 3 web Napkin Folder. 13½" cut-off. 8" to 15" wide. With AC motor equipment. Production 1800 per minute. Perfect Condition.

1—Paper Converting Machine Co. 4-Web Dispenser Type Napkin Folder. Production 100M per Hour.

1—Two-web Paper Converting Machine Co. Quarter Fold Napkin Machine. 13¾ cut-off. With Embosser and Three color Printer. Capacity up to 30,800 per hour on printed stock.

CAMERON SLITTERS

1—40" Model 4-B.

1—42" Type 40-T.

1—50" and 1—60" Type 28, Model 3D.

1—52" Type 8-S.

1—54" Universal Type 6.

1—62" and 1—63" Type 9.

1—62" Type 10-S.

1—72" Type 10, Model 5.

1—60" Kidder Model SH Slitter & Rewinder. Rewinds up to 40" diameter.

1—60" Hammersly Score Cut Slitter & Rewinder.

1—48" Inman Board Slitter and Rewinder. Rewinds 48" diameter rolls.

Power Paper Cutters: 6 Seybold—1—40" 10Z, 54" and 64" 20th Century, 54" Holyoke, 56" Dayton, 84" 2-H. 6 Oswego—34", 44", 50", 57" and 63". White—1—40". 2 Acme—32" and 42". Sheridan—1—64". 3 S&W Undercut—63", 84" and 92".

1—65" and 1—84" waxing machine.

1—Brand New Potdevin #102 Flat and Square Bag Machine, making bags from ¼ to 6 lbs.

3—Potdevin Flat & Square Bag Machines. Models 292, 294 and 391.

1—Nasko High Speed Flat & Square Bag Machine. Complete and in A-1 condition. Large range of formers and gears.

1—45" German Dornbusch Embossing machine with two sets of embossing rolls.

1—36" and 1—45" Beck Rotary Sheet Cutters with 3 roll backstands and jogger delivery table.

1—45" and 1—48" Clark Aiken Rotary Sheet Cutter.

1—72" Hamblet Single Rotary Sheet Cutter with Slitting Attachment, Automatic Layboy and 12-Roll Double-Deck Backstands.

1—82" single Hamblet rotary sheet cutter with layboy and 24 roll backstands.

1—90" Clark Aiken anti-friction bearing Single Rotary Sheet Cutter with slitting attachment. Moore & White 5 partition Layboy and 6 roll double-deck backstands. Excellent condition.

2—Moore & White 106" single rotary sheet cutters with 6 roll double deck backstands & Moore & White layboys.

1—110" and 1—66" Downingtown Duplex Rotary Sheet Cutters. Each with 2 Llewellyn Drives.

6—Shartle Washer Breaker Beaters—Rolls 80" x 55".

1—81" Dietz Facial Tissue Paper perforator, 4½" perforation.

2—81" Dietz Toilet Paper Perforators. Sheets 4½ x 4½ and 4½ x 5 and paper towels perforated 7½ and 13½".

1—#4 Hudson Sharp Special Folding Machine, complete with A.C. motor equipment.

1—41" wide 3-color roll to roll Wolverine aniline printing press. Complete with Reeves Drive and A.C. motor equipment, practically new.

1—#14 Mitts & Merrill AIR-FLUFF Paper Excelsior Shredder. With AC Motor, Variable Speed Drive and 7' Feed Table.

1—48" x 80" Dryer. Operating pressure 60 lbs.

1—30" x 72" IMPCO. Cylinder Mould.

2—12" x 12" Beloit Triplex Plunger Stock Pumps.

1—Weiner Refiner.

GIBBS - BROWER COMPANY, INC.
21 East 40th St., New York 16, N. Y. O-27

FOR SALE

FOR SALE

2—Morden Stock-Makers complete with 200 H.P., 440 volt, 3 phase, 60 cycle motors, plus 1 spare semi-stainless steel filling.

Address Box 49-518 care Paper Trade Journal N-17

FOR SALE

Long established and successful paper converting business. Owner retiring on account of age. For full particulars address Box #49-511 care Paper Trade Journal. O-27

FOR SALE OR LEASE

Small paper mill with cylinder machine. Situated advantageously to sources of raw material and sales outlet. Ample room for converting plant in same building. Terms. Address Box 49-357, care Paper Trade Journal. TF

FOR SALE—New 64" Maier Rotary Cut-Off Knife, cuts 32" to 120" sheet lengths up to ¼" thick board; new 100" Knowlton Bar Creaser with 4-crease widths. GREGGORY, INC., 203 No. Wabash Ave., Chicago, 1, Ill. TF

FOR SALE—Two F. L. Smithe Webb Machines in 1st class condition equipped with 2 color printing units. Range sizes from Min. 3⅝ x 6¾ O.E. to Max. 7 x 8½ O.E. Address Box 49-452 care Paper Trade Journal. D-29

PAPER COATING MACHINERY MANUFACTURERS — Waxing, Oiling, Carbon, Laboratory Coating and Treating Machines. New improvement. MAYER MACHINE COMPANY, Inc., 1313 Buffalo Road, Rochester 11, N. Y. TF

FOR SALE—One (1) Beloit High Speed Double Drum Winder, consisting of two (2) —18" diameter x 156" face cast iron grooved winder drums, etc. Address Box 49-527 care Paper Trade Journal. N-3

WANTED

WANTED

4 color Rotary Letterpress 50 to 60" printing width, must be suitable for close register work. Box No. 49-505, care Paper Trade Journal. O-27

WANTED

Titaniums—Glycols
Alkalies—Waxes—Solvents
Colors—Oils—Residues, etc.

Chemical Service Corporation
86-04 Beaver St., New York 5, N. Y.
O-27

WANTED

Pulper or Breaker Beater—75 ton daily capacity
Liner Beater—25 ton daily capacity
Main and Reversing press—Equipped with housings, frames and drives—81" Face

BOX 49-478. Care Paper Trade Journal.
O-27

WANTED

WANTED

One complete set Lockport or Potdevin Self-Opening Bag Machine ⅛ to 25 pound capacity, complete with accessories, new or rebuilt, export boxed. Address Box 49-526, care Paper Trade Journal. N-3

WANTED
TOILET TISSUE & NAPKIN STOCK
IN JUMBO ROLLS

Midwest paper mill converter would like to contact manufacturer interested in furnishing substantial quantities. Write Box 49-523, care Paper Trade Journal. N-10

WANTED

One Sheeter, 48-50", new preferred, complete with accessories, export boxed. Address Box 49-525 care Paper Trade Journal. N-3

WANTED—Facial Tissue Toilet Machine; Sheeter 81" or wider. Address Box 49-499 care Paper Trade Journal. O-27

WANTED—Brightwood Box Machine. Address Box 49-275 care Paper Trade Journal.

WANTED—W & P Shredders, Evaporators, Generators and Boilers, Slitters, Cutters, Hydraulic presses, Sheridan Presses, Dryers. Address Box 49-273 care Paper Trade Journal. TF

PAPER MANUFACTURER desire to purchase or invest in converting business of standard paper products. Address Box 49-274 care Paper Trade Journal. TF

PAPER BAG PLANT WANTED. Making Glassine, Waxed Paper and Cellophane Specialty Bags. Write details. Address Box 49-520 care Paper Trade Journal. O-27

WANTED—64" Seybold Trimmer in excellent condition. Would consider 56". Also have 56" to trade if desired. Address Box 49-516 care Paper Trade Journal. O-27

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ADVERTISING

BRINGS

RESULTS

1 plan helps prevent all 3

When you show the people in your company that you're interested in their welfare, they naturally react favorably. That's why *production goes up* when you boost your employee-participation in the Payroll Savings Plan. Here's how it happens:

The more U. S. Savings Bonds an employee holds, the more secure he feels. The more secure he feels, the greater his peace of mind—the more contented, careful, and productive he is on the job.

Those facts aren't just something we dreamed up. They're borne out in the experience of more than 20,000 companies promoting the Plan.

Everybody Benefits!

Bond sales spread the national debt, thus increasing our national economic security. And, of course, what's good for the nation is good for you and your business!

The individual Bond buyer gets back $4, when his Bonds mature, for every $3 he invested. That's a boon for him, and—multiplied by millions of Bond holders—represents a huge backlog of purchasing power that will help assure national prosperity through the years ahead.

Five Steps Boost Participation

1. See that a top management man sponsors the Plan.

2. Secure the help of the employee organizations in promoting it.

3. Adequately use posters and leaflets and run stories and editorials in company publications to inform employees of the Payroll Savings Plan's benefits to them.

4. Make a person-to person canvass, once a year, to sign up participants.

These first four steps should win you 40-60% participation. Normal employee turnover necessitates one more step:

5. Urge each new employee, at the time he is hired, to sign up.

Nation-wide experience indicates that 50% of your employees can be persuaded to join—without high-pressure selling. All the help you need is available from your State Director, U. S. Treasury Department, Savings Bonds Division. He is listed in your telephone directory. Wouldn't it be a good idea to call him right now, while it's on your mind?

The Treasury Department acknowledges with appreciation the publication of this message by

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This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

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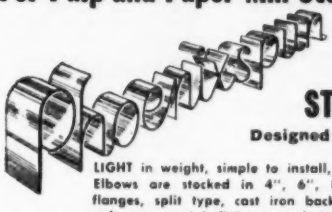

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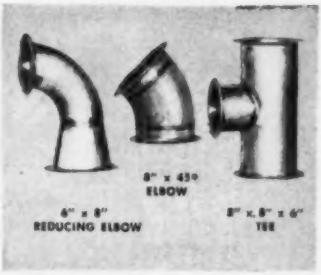

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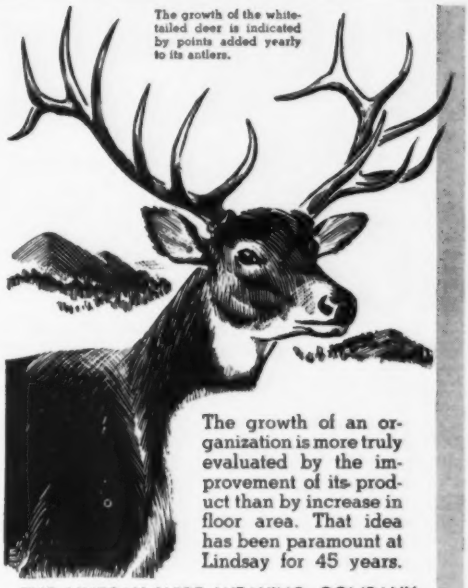

The growth of the white-tailed deer is indicated by points added yearly to its antlers.

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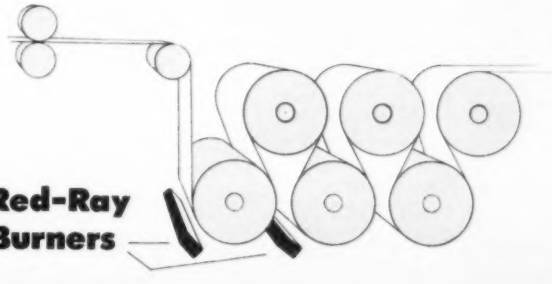

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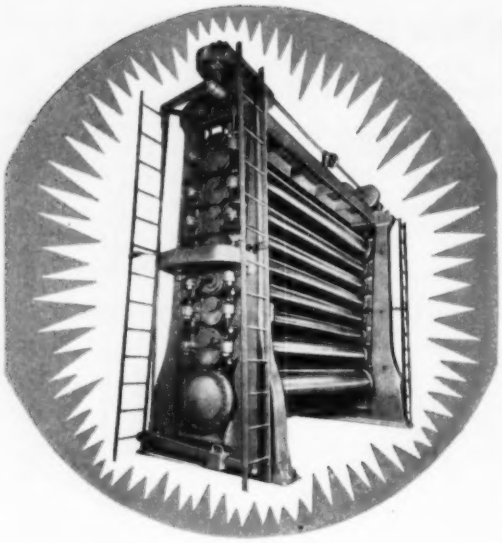

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Hooker Electrochemical Co.
The Kinsley Chemical Company
Monsanto Chemical Company
National Aluminate Corp.
Niagara Alkali Company
Nopco Chemical Co.
Pittsburgh Plate Glass Co., Columbia Chemical Division
Rohm & Haas Co.
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The Dow Chemical Company
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General Dyestuff Corp.
Monsanto Chemical Company
Nopco Chemical Co.
Pittsburgh Plate Glass Co.
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Link Belt Company
Moore & White Co.
D. J. Murray Mfg. Co.
The Sandy Hill Iron & Brass Works

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Shartle Brothers Machine Co.
Valley Iron Works
Waldron Corp., John

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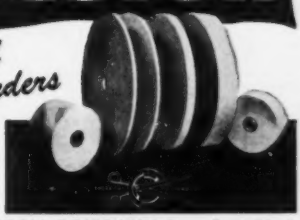

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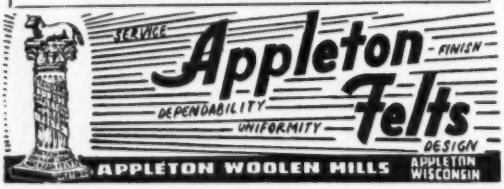

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Kinsley Chemical Co.
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DIRTEC
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Lodding Engineering Corp.
The Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.

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Black-Clawson Company
Lodding Engrg. Corp.
The Moore & White Co.
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The Moore & White Co.
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J. J. Ross Company
Red Ray Mfg. Co., Inc.
Ross Paper Machy. Co.
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Bird Machine Co.
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Chain Belt Company
Davis, Frank H., Co.
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Fairbanks, Morse & Co.
Farrel-Birmingham Co.
General Electric Company
Gibbs-Brower Company, Inc.
Rodney Hunt Machine Co.
Link Belt Company
Moore & White Co.
Murray, D. J., Mfg. Co.
Pusey & Jones Corp.
J. J. Ross Company
Ross Paper Machy. Corp.
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Syco Mfg. Co.
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M. W. Jenkins Sons, Inc.
E. D. Jones & Son Co.
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John Waldron Corp.

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Geigy Co., The
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C. K. Williams & Co.
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John Waldron Corp.

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Nopco Chemical Co.
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Stephens-Adamson Mfg. Co.

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Shartle Brothers Machine Co.
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Witco Chemical Co.

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The Moore & White Co.
Noble & Wood Machine Co.
Oliver United Filters, Inc.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.

FREENESS TESTERS
Testing Machines, Inc.

GASKETS
The Goodyear Tire & Rubber Company

GEARS
Black-Clawson Company
De Laval Steam Turbine Co.
Downingtown Mfg. Co.
Frank W. Egan & Co.
Farrel-Birmingham Co.
E. D. Jones & Sons Co.
Link Belt Company
Moore & White Co.
D. J. Murray Mfg. Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Valley Iron Works Co.
Westinghouse Electric Corp.

GRINDERS
Carthage Machine Co.
Farrel-Birmingham Co.
Gibbs-Brower Company, Inc.
Lobdell Co.
Norton Company
Samuel C. Rogers and Company
The Sandy Hill Iron & Brass Works

GRINDING WHEELS
Norton Company

GUIDES, WEB
Askania Regulator Company
The Moore & White Co.
Mount Hope Machinery Co.
Bound Brook Engrg. Co.
John Waldron Corp.

GUMMING MACHINES
Dilts Machine Works.

GUMS
National Starch Products Inc.
Stein-Hall Co., Inc.

HEADS
Babcock & Wilcox Co.
Lukens Steel Company

HEAT EXCHANGERS AND RECOVERY SYSTEMS
William Allen Son's Company
Davis Engrg. Corp.
Stickle Steam Specialties Co.
Westinghouse Electric Corp.

HEATING, VENTILATING & AIR CONDITIONING
The Appleton Machine Co.
Armstrong Machine Works
Davis Engrg. Corp.
E. D. Jones & Sons Co.
General Electric Co.
Leeds & Northrup
Minneapolis-Honeywell Regulator Co.
D. J. Murray Mfg. Co.
Red-Ray Mfg. Co., Inc.
Ross Engineering Corp., J. O.
Stickle Steam Specialties Co.
Valley Iron Works Co.
Westinghouse Electric Corp.

HOSE (Air, Water, Suction, etc.
The Goodyear Tire & Rubber Company

IMPREGNANTS
American Anode Div., The B. F. Goodrich Chem. Co.

INDENTING MACHINES
Dilts Machine Works.

INDUSTRIAL TRACTORS
Towmotor Corp.

INK GRAVURE
Gotham Ink & Color Co.

INSTRUMENTS, TESTING AND MEASURING
Askania Regulator Company
Bauer Brothers Co.
N. P. Bowsher
The Bristol Company
The Brown Instrument Co.
E. J. Cady Company
Cochrane Corp.
The Foxboro Company
General Electric Company
W. & L. E. Gurley
Leeds & Northrup Company
National Technical Laboratories
B. F. Perkins & Son
Photovolt Corp.
Taylor Instrument Cos.
Testing Machines, Inc.
Williams Apparatus Co., Inc.

JOINTS
Johnson Corp.
Perfecting Service Corp.

JORDAN FILLINGS
Appleton Machine Co.
Bahr Brothers Mfg. Co.
E. D. Jones & Sons Co.
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Valley Iron Works Co.

KNIVES
Black-Clawson Company
Dilts Machine Works, Inc.
Hamblet Machine Co.
Heppenstall Company
E. D. Jones & Sons Co.
The Moore & White Co.
Taylor Stiles & Co.
Valley Iron Works Co.

KNOT BORING MACHINES
DeZurik Shower Company

LABORATORIES
Timber Engrg. Co.

LABORATORY EQUIPMENT
William Allen Son's Company
Appleton Machine Co.
Bauer Brothers Co.
The Bigge Boiler Works Co.
Bird Machine Company
Dilts Machine Works
W. & L. E. Gurley
E. D. Jones & Sons Co.
Leeds & Northrup Company
National Technical Laboratories

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- AC and DC GENERATORS
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- CONTROLS
- HOISTS
- CRANES
- COMPRESSORS
- PUMPS

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3 PHASE, 60 CYCLE

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200	Westg.	CS-956A	2300	900
200	G.E.	K	2300	720
200	Westg.	CS-32B	440	720
200	Westg.	CS-950A	440	600
200	G.E.	IK-15A	440	450
150	Westg.	CS-771-1C	440	1750
150	Westg.	CS	2200	1200
150	Cont. TEFC	NP-743K	440	900
150	Westg.	CS-950A	440	600
150	G.E.	KT-564	2300	600
125	Westg. BB	CS	440	3600
125	G.E. TEFC	K-6326S	440	1200
125	G.E.	IK	2300	1200
125	Al. Ch. BB	AR-826DS	440	1200
100	G.E.	KT	2300	1800
100	Burke	EM-12.5	220	1200
100	U.S. Vert.	CFU-994A	220/440	1200
100	Al. Ch. BB	ARZ-826	440	900
100	G.E.	K-6333	440	720
75	Al. Ch.	AR-223-BS	2200	1800
75	Al. Ch. BB	AR-505	220/440	1200
75	Al. Ch.	AR	440	1200
75	G.E. TEFC	K-505	220	1200

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MUSIC	FILE FOLDER
POSTER	TAG
BOND	COATED
WRITING	MACHINE COATED

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KRAFT LINER BOARD

MILLS

Machanicville, New York	Tyrone, Pennsylvania
Luke, Maryland	Williamsburg, Pennsylvania
Covington, Virginia	Charleston, South Carolina

WHERE TO BUY

Taylor Instrument Companies
Testing Machines, Inc.
Valley Iron Works Co.

LAMINATING MACHINES
Dilts Machine Works.

LAY BOYS
Dilts Machine Works
Gibbs-Brower Company, Inc.
Hamblet Machine Co.
Moore & White Co.

LUBRICANTS
Sinclair Refining Co.
Socony-Vacuum Oil Co.
Sun Oil Company
The Texas Company
Tide Water Associated Oil Co

MAGAZINE REELS
Dilts Machine Works (Kohler System).

MATERIALS HANDLING
Cleveland Crane & Engrg. Co
Frank G. Hough Co.
Stephens-Adamson Mfg. Co.
The Wellman Engrg. Co.

MICROMETERS & CALIPERS
E. J. Cady Co.
Farrel-Birmingham Co.
Montague Machine Co.
Lobdell Co.
Testing Machines, Inc.

MOISTURE CONTENT CONTROL
Askania Regulator Company
Stickle Steam Specialties Co

MOTORS AND GENERATORS
Allis-Chalmers Mfg. Co.
Chicago Electric Company
Fairbanks, Morse & Co.
General Electric Company
Reliance Electric & Engrg. Co

NICKEL AND NICKEL ALLOYS
The International Nickel Co.

NOZZLES
Link Belt Company

PACKING BOXES
Johnson Corporation
The Moore & White Co.
Perfecting Service Corp.
Shartle Brothers Machine Co.

PAPER MACHINES
Bagley & Sewall Co.
Black-Clawson Company
Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Lukenweld
Moore & White Co.
Pusey & Jones Corp
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.

PAPER MACHINE SLICES
Black-Clawson Company
E. D. Jones & Sons Co.
The Moore & White Co.
The Sandy Hill Iron & Brass Works
Valley Iron Works Co.

PAPER TUBE MACHINERY
Dietz Machine Works
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Hudson Sharp Machine Co.
Langston Co., Samuel M.

PASTING MACHINES
Black-Clawson Company
Davis, Frank H., Co.
Dilts Machine Wks.
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
Murray, D. J., Mfg. Co.
Moore & White Co.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Waldron Corp., John

PENSTOCKS
The Bigge Boiler Works Co.

PERFORATED METAL
Allis-Chalmers Mfg. Co.

PIPE
American Cast Iron Pipe Co.
Armco Drainage & Metal Products, Inc.
Babcock & Wilcox Co.
Crane Company
Michigan Pipe Co.
Michigan Steel Casting Co.
National Tube Co.
Walworth Company
Youngstown Welding & Engrg. Co.

PIPE FITTINGS
American Cast Iron Pipe Co.
The American Rolling Mill Co.
Crane Company
Michigan Steel Casting Co.
Phoenix Products Co.
Walworth Co.

PIPE MARKERS
W. H. Brady Co.

PITCH CONTROL
General Dyestuff Corp.
Monsanto Chemical Company
Rohm & Haas Co.

PLATERS
Gibbs-Brower Company, Inc
Perkins & Son, Inc., B. F

PLATES
Armco Steel Corp.
Babcock & Wilcox Co.
The Bigge Boiler Works Co.
J. O. Ross Engrg. Corp.
Lukenweld
Lukens Steel Company
Timken Roller Bearing Co.

PLUGS
The Appleton Machine Co.
Black-Clawson Company
E. D. Jones & Sons Co.
Shartle Brothers Machine Co.

PRECIPITATORS
Koppers Co., Inc.

PRECISION SAMPLE CUTTER
Testing Machines, Inc.

PRESERVATIVES
E. I. du Pont de Nemours & Co.
General Dyestuff Corp.

PRESSURE VESSELS, STEEL AND ALLOY
Babcock & Wilcox Co.
The Bigge Boiler Works Co.

PRESSES
Black-Clawson Company
Dietz Machine Works
Farrel-Birmingham Co.
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Hudson-Sharp Machine Co.
The Moore & White Co.
Paper Converting Machine Co., Inc.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Valley Iron Works Co.
Waldron Corp., John
H. G. Weber & Co., Inc.
Williams Apparatus Co.

PULP CLASSIFIER
The Bauer Bros. Co.

PULP STOCK VALVES
Crane Company
Record Fdy. & Mach. Co.
Shartle Bros. Mach. Co.

PULPERS
Bauer Brothers Co.
Dilts Machine Works
E. D. Jones & Sons Co.
Shartle Brothers Machine Co.

PULPS
Brown Company
Bulkley, Dunton Pulp Co., Inc.
Gotteaman & Co., Inc.
Elof Hansson, Inc.
Lyddon & Co. (America), Inc.
Parsons & Whittemore, Inc.

Perkins-Goodwin Co.
Price & Pierce, Ltd.
Pulp and Paper Trading Co.
Pulp Sales Corp.

PULPSTONES

Norton Company

PUMPS

Allis-Chalmers Mfg. Co.
Black-Clawson Company
Buffalo Pumps, Inc.
Byron Jackson Co.
DeLaval Steam Turbine Co.
Dorr Company
Downingtown Mfg. Co.
Fairbanks, Morse & Co.
Frederick Iron & Steel, Inc.
Gibbs-Brower Company, Inc.
Johnson Corp.
Moore & White Co.
Nash Engineering Co.
Paper Converting Mch. Co.
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Warren Steam Pump Company

RADIANT BURNERS

Red-Ray Mfg. Co., Inc.

RAG COOKING PROCESSES

William Allen Son's Company
The Kinsley Chemical Company
General Dyestuff Corp.
Rohm & Haas Co.

RAG CUTTERS

Gibbs-Brower Company, Inc.
B. F. Perkins & Son, Inc.
Taylor-Stiles & Co.

RECAUSTICIZING PLANTS

The Dorr Company

RECOVERY SYSTEMS

William Allen Son's Company
Babcock & Wilcox Co.
Bulkley, Dunton Pulp Co., Inc.
Rodney Hunt Machine Co.
Moore & White Co.
D. J. Murray Mfg. Co.
Pusey & Jones Corp.
Ross Engineering Corp., J. O.
Valley Iron Works Co.

REELS

The Appleton Machine Co.
Black-Clawson Company
Dilts Machine Works (Kohler System)
Downingtown Mfg. Co.
Hudson Sharp Machine Co.
Moore & White Co.
Paper Converting Mch. Co.
Rodney Hunt Machine Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
The Smith & Winchester Mfg. Co.

REFINERS

Appleton Machine Co.
Bahr Brothers Mfg. Co.
Bauer Brothers Co.
Dilts Machine Works
Gibbs-Brower Company, Inc.
E. D. Jones & Sons Co.
Morden Machines Co.
Murray, D. J., Mfg. Co.
Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Sutherland Refiner Corp.
Valley Iron Works

REGULATORS

Allis-Chalmers Mfg. Co.
Armstrong Machine Works
Bird Machine Company
The Bristol Company
DeZurik Shower Company
The Foxboro Company
General Electric Co.
Johnson Corp.
Leeds & Northrup Company
Minneapolis-Honeywell Regulator Co.
National Technical Laboratories
Shartle Brothers
Stickle Steam Specialties Co.
Taylor Instrument Companies
Wallace & Tiernan

RESEARCH CHEMISTS

Timber Engrg. Co.

RESINS

American Cyanamid Company, Industrial Chemicals Division
The Dow Chemical Company
The Goodyear Tire & Rubber Company
Hercules Powder Co.
Monsanto Chemical Company
Rohm & Haas Co., Resinous Products Div.

ROLLS

American Cast Iron Pipe Co.
Appleton Machine Co.
Black-Clawson Company
Downingtown Mfg. Co.
Frank W. Egan & Co.
Farrel-Birmingham Co.
Gibbs-Brower Company, Inc.
Lobdell Co.
Edward J. McBride & Co.
The Moore & White Co.
D. J. Murray Mfg. Co.
Perkins, B. F., & Sons Co.
Philbrick Engrg. Corp.
Pusey & Jones Corp.
J. J. Ross Company
Ross Paper Machy. Co.
Rodney Hunt Machine Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Valley Iron Works Co.
Waldron Corp., John
The Youngstown Welding & Engrg. Co.

ROLL COVERS

The Cincinnati Rubber Mfg. Co.
The Goodyear Tire & Rubber Company
Edward J. McBride & Co.
Stowe-Woodward, Inc.

ROLL HANDLING EQUIPMENT

Dilts Machine Works (Kohler System).

ROLL STANDS

Cameron Machine Co.
Frank W. Egan & Co.
Moore & White Co.
Potdevin Machine Co.
John Waldron Corp.
H. G. Weber & Co., Inc.

ROPE CARRIERS

The Moore & White Co.

ROTARY BOILERS

The Biggs Boiler Works Co.

ROTARY STEAM JOINTS

Johnson Corp.
The Moore & White Co.
Perfecting Service Corp.

RUBBER PRODUCTS

The Goodyear Tire & Rubber Company

SATURANTS

American Anode Div., The B. F. Goodrich Chem. Co.

SATURATING MACHINES

Black-Clawson Company
Dilts Machine Works
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
Moore & White Co.
Noble & Wood Machine Co.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Waldron Corp., John
Weber, Herman G.

SAVEALLS

Bird Machine Company
Hardinge Company

SCALES

Fairbanks, Morse & Co.
Merrick Scale Mfg. Co.
Testing Machines, Inc.

SCREEN PLATES

Bird Machine Company
Pitchburg Screen Plate Co.
Magnus Metal Corp.
Morey Paper Mill Supply Co.
Testing Machines, Inc.

SCREENS

Allis-Chalmers Mfg. Co.
Appleton Wire Works
Appleton Machine Company
Bird Machine Company
Carthage Machine Co.
Dilts Machine Works, Inc.
Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
E. D. Jones & Sons Co.
Link Belt Company
Moore & White Co.
D. J. Murray Mfg. Co.
J. J. Ross Company
Ross Paper Machy. Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Stephens-Adamson Mfg. Co.
Valley Iron Works Co.

SHEET MACHINES

Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Valley Iron Works Co.

SHOWER PIPES

Bird Machine Company
DeZurik Shower Company
Downingtown Mfg. Co.
Moore & White Co.
Sandusky Fdy. & Mch. Co.
Shartle Bros. Mach. Co.
Smith & Winchester Mfg. Co.

SHREDDERS

Bauer Brothers Co.
Carthage Machine Co.
Gibbs-Brower Company, Inc.

SIZING

American Cyanamid Company, Industrial Chemicals Division
Black-Clawson Company
The Dow Chemical Company
du Pont, E. I., de Nemours & Co.
Hercules Powder Co.
The Hubinger Co.
Monsanto Chemical Company
National Aluminate Corp.
Stein-Hall Co., Inc.

SIZING TESTER

W. & L. E. Gurley
Testing Machines, Inc.

SLIME CONTROL

The Dow Chemical Company
E. I. du Pont de Nemours & Co.
General Dyestuff Corp.
Monsanto Chemical Co.
National Aluminate Corp.
Rohm & Haas Co.

SLITTERS

Black-Clawson Company
Cameron Machine Co.
Carthage Machine Co.
Dietz Machine Works
Dilts Machine Works
Downingtown Mfg. Co.
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
Thomas W. Hall Co., Inc.
Hamblet Machine Co.
Hudson Sharp Machine Co.
Langston Co., Samuel M.
Moore & White Co.
D. J. Murray Mfg. Co.
Potdevin Machine Co.
J. J. Ross Company
Ross Paper Machy. Co.
The Sandy Hill Iron & Brass Works
Smith & Winchester Mfg. Co.
Valley Iron Works Co.
Waldron Corp., John

SMOKE STACKS

The Biggs Boiler Works Co.

SPECIAL MACHINERY

Dilts Machine Works.

SPLICING TISSUE

Williams-Gray Co.

SOFTNESS-STIFFNESS TESTER

W. & L. E. Gurley
Testing Machines, Inc.

SOLUBLE OILS

American Cyanamid Company, Industrial Chemicals Division
General Dyestuff Corp.
Nopco Chemical Co.

STAINLESS STEEL

American Cast Iron Pipe Co.
Armco Steel Corp.
Michigan Steel Casting Co.
U. S. Steel Corp.

STARCH

American Cyanamid Company, Industrial Chemicals Division
A. M. Meincke & Son, Inc.
Clinton Industries, Inc.
The Hubinger Co.
National Starch Products Inc.
Stein-Hall Co., Inc.

STEAM JOINTS

The Moore & White Co.

STEAM SPECIALTIES

Babcock & Wilcox Co.
Combustion Engrg. Co., Inc.
Davis Engrg. Corp.
Johnson Corp.
Perfecting Service Corp.
Shartle Bros. Mch. Co.
Stickle Steam Specialties Co.

STEEL

Allegheny Ludlum Steel Corp.
Armco Steel Corp.
Carnegie Illinois Steel Co.
Lukens Steel Company
D. J. Murray Mfg. Co.
The Sandy Hill Iron & Brass Works
U. S. Steel Corp.

STEEL, CLAD

Babcock & Wilcox Co.
Lukens Steel Company

STEEL TANKS

The Biggs Boiler Works Co.

STRAPPINGS & STRAPPING MACHINES

The Stanley Works

STUFF CHESTS

Downingtown Mfg. Co.
E. D. Jones & Sons Co.
Moore & White Co.
Shartle Brothers Machine Co.
Valley Iron Works Co.

SUCTION BOXES

Black-Clawson Company
Downingtown Mfg. Co.
E. D. Jones & Sons Co.
Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.

SUCTION UNIT

Paper & Industrial Appliances, Inc.

SULPHUR

American Cyanamid Company, Industrial Chemicals Division
Texas Gulf Sulphur Co.
Witco Chemical Company

SULPHUR BURNERS

Valley Iron Works Co.

SULPHUR DIOXIDE

American Cyanamid Co., Calco Chemical Div.
Virginia Smelting Co.

SUPERCALENDERS

The Appleton Machine Co.
B. F. Perkins & Son, Inc.

SYNTHETIC LATICES

American Anode Div., The B. F. Goodrich Chem. Co.
The Goodyear Tire & Rubber Company
Nopco Chemical Co.

TACHOMETERS

The Brown Instrument Co.

TAKE-OFF UNITS

Dilts Machine Works (Kohler System).

TALC

American Cyanamid Company, Industrial Chemicals Division

TANKS

The Biggs Boiler Works Co.
Cochrane Corp.
Kalamazoo Tank & Silo Co.
The Noble & Wood Machine Co.
B. F. Perkins & Son, Inc.
J. O. Ross Engrg. Corp.
Shartle Brothers Machine Co.
Waldron Corp., John

TEARING TESTERS

Testing Machines, Inc.

TENSILE TESTERS

B. F. Perkins & Son, Inc.
Testing Machines Inc.

WHERE TO BUY

THICKENERS, DECKERS AND SAVEALLS
The Appleton Machine Co.
Bird Machine Company
Bulkley, Dunton Pulp Co., Inc.
Carthage Machine Co.
Dilts Machine Works
Dorr Co.
Downingtown Mfg. Co.
Hardinge Co., Inc.
Moore & White Co.
D. J. Murray Mfg. Co.
Oliver United Filters, Inc.
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Wks.
Shartle Brothers Machine Co.
Valley Iron Works Co.

TIMBER ROOF TRUSS DESIGNS
Timber Engrg. Co.

TITANIUM
American Cyanamid Co., Calco Chemical Div.
E. I. du Pont de Nemours & Co.
Titanium Pigment Co.
R. T. Vanderbilt Co.
Witco Chemical Company

TOOLS
The Stanley Works
Walworth Company

TRACTOR SHOVELS
Frank G. Hough Co.

TRACTORS & TRUCKS
Frank G. Hough Co.
Townsitor Corp.

TRANSMISSIONS
Link Belt Company
Stephens-Adamson Mfg. Co.

TRAPS
Armstrong Machine Works
Crane Co.
Johnson Corporation
Shartle Bros. Mch. Co.
Stickle Steam Specialties Co.

TUBES
Babcock & Wilcox Co.
National Tube Co.

TUBING MACHINES
Dilts Machine Works.

TUBING, MECHANICAL
National Tube Co.

TUBS
Rodney Hunt Machine Co.
Shartle Brothers
Valley Iron Works Co.

TURBINES
Allis Chalmers Mfg. Co.
De Laval Steam Turbine Co.
General Electric Company
Hunt, Rodney, Mach. Co.

TURPENTINE RECOVERY
Foster Wheeler Corp.

UNWINDERS
Dilts Machine Works (Kohler System).

USED EQUIPMENT
Frank H. Davis Company
Gibbs Brower Co.
Thomas W. Hall Co.
J. J. Ross Company
Ross Paper Machy. Corp.
Shartle Brothers Machine Co.

VALVES
Askania Regulator Co.
The Bristol Company
The Brown Instrument Co.
Cochrane Corp.
Crane Company
Dilts Machine Works
The Foxboro Company
E. D. Jones & Sons Co.
Magnus Metal Corp.
D. J. Murray Mfg. Co.
William Powell Co.
Record Fdy. & Mch. Co.
The Sandy Hill Iron & Brass Wks.
Shartle Brothers Machine Co.
Stickle Steam Specialties Co.
Taylor Instrument Companies
Trimbey Mach. Wks.
Valley Iron Works Co.
Walworth Company

WASHERS
Bird Machine Company
Downingtown Mfg. Co.
Gibbs Brower Company, Inc.
E. D. Jones & Sons Co.
Moore & White Co.
Oliver United Filters
The Sandy Hill Iron & Brass Wks.
Rodney Hunt Machine Co.
Shartle Brothers Machine Co.
Valley Iron Works Co.

WASTE TREATING EQUIPMENT
The Dorr Company
Hungerford & Terry, Inc.

WATER CONDITIONING
Calgon, Inc.
General Dyestuff Corp.
Hungerford & Terry, Inc.
National Aluminate Corp.

WATER DISPERSIONS
American Anode, Inc.
Rohm & Haas Co., Resinous Products Div.

WATER FINISH EQUIPMENT
Dilts Machine Works.

WATER SOFTENERS
Hungerford & Terry, Inc.

WAXING MACHINERY
Black-Clawson Co.
Dilts Machine Works
Frank W. Egan & Co.
Gibbs Brower Company, Inc.
The Mayer Machine Co.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Waldron Corp., John
Weber, Herman G.

WEB TENSION CONTROL
Dilts Machine Works (Kohler System).

WELDING EQUIPMENT
General Electric Company
Walworth Company

WET MACHINES
Black-Clawson Co.
Carthage Machine Co.
Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
Moore & White Co.
Pusey & Jones Company
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Valley Iron Works Co.

WETTING AGENTS
American Cyanamid Company, Industrial Chemicals Division
General Dyestuff Corp.
Monsanto Chemical Company
Nopco Chemical Co.
Rohm & Haas Co.
Wyandotte Chemicals Corp.

WHITE WATER HEATERS, AUTOMATIC SELF CLEANING TYPE
Davis Engineering Corp.

WHITE WATER TREATING EQUIPT.
Hungerford & Terry, Inc.

WINDERS AND REWINDERS
The Appleton Machine Co.
Black-Clawson Company
Cameron Machine Co.
Dietz Machine Works
Dilts Machine Works (Kohler System)
Downingtown Mfg. Co.
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Hudson-Sharp Mach. Co.
Langston Co., Samuel M.
Moore & White Co.
Paper Converting Mch. Co.
Potdevin Machine Co.
Pusey & Jones Corp.
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Smith & Winchester Mfg. Co.
Waldron Corp., John

WINDING ROLL CHANGERS
Dilts Machine Works (Kohler System).

WIRE BRUSHES
M. W. Jenkins Sons Inc.

WIRES
Appleton Wire Works
Bulkley, Dunton Pulp Co., Inc.
International Wire Works
Lindsay Wire Weaving Co.
Williams-Gray Co.

WIRE BRUSHES
Williams-Gray Co.

WOOD SPLITTERS
The Appleton Machine Co.
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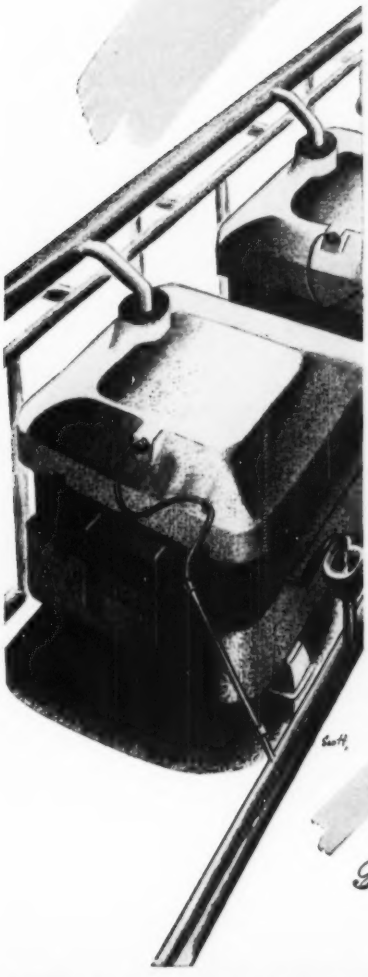
How Hooker cell research helped bring bleaching costs down



THE WRIGHT BROTHERS had just proved that a heavier than air machine could sustain itself in flight, when a group of men with foresight along different lines, organized to explore the possibilities of a new patent. The object of this patent, the Townsend cell, was a new type of electrolytic, diaphragm cell. In exhaustive tests it substantiated the claims made for it in producing chlorine by passing direct current through a brine solution.

In 1906, just three years later, the Hooker Electrochemical Company was in operation at Niagara Falls close to an unfailing source of hydro-electric power, and ready to supply its chief product, bleaching powder, to the pulp and paper industry.

Hooker chemical engineers have kept up continuous research and experimentation to improve Hooker cell efficiency and bring costs down. In 1913 the Hooker "F" cell gave way to the "E" cell. Later improvements are found in the present Hooker type "S" cell of radically new design. This cell is highly efficient as to power and economical as to cost of installation, maintenance, and operation—all of which means uniform quality chlorine and caustic to you at a reasonable price. Because of these improvements in cell design and other manufacturing economies, the price of chlorine has been brought down from $120.00 a ton in 1921 to approximately $40.00 a ton today.

Coincident with these developments, Hooker Technicians were working with pulp and paper making chemists; suggesting new bleaching techniques, conducting experiments and tests to learn the why and the how of pulp and paper processes. Their findings are available in Bulletin form reprinted by the Hooker Electrochemical Company. They cover subjects of interest to everyone in the pulp and paper field. Those of you who have recently become associated with this industry will find them of especial profit. Send for a list of the currently available Hooker Bulletins.

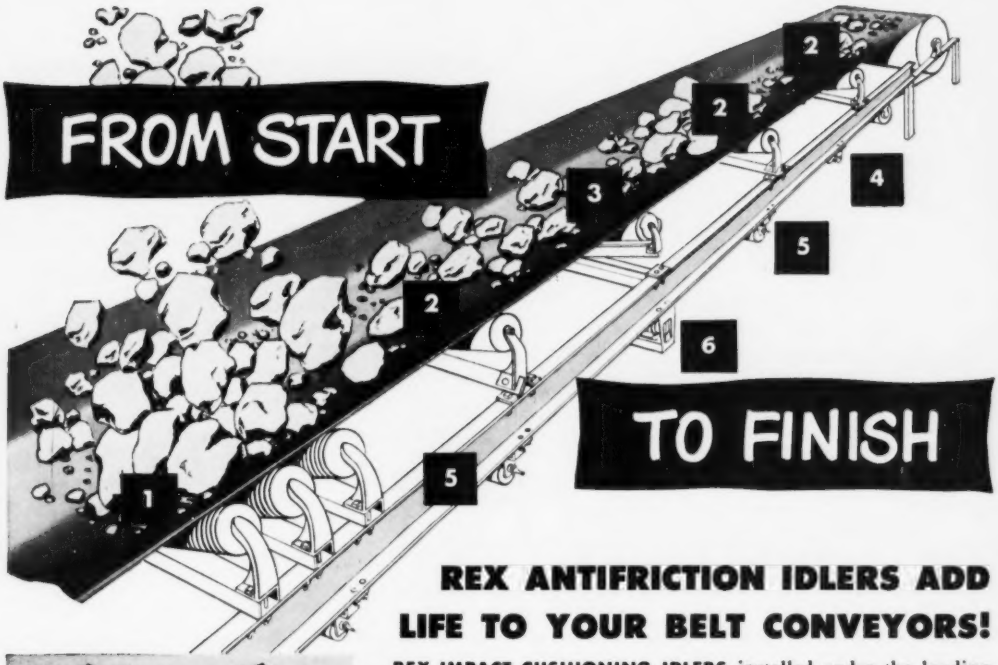
HOOKER ELECTROCHEMICAL COMPANY
2 UNION STREET, NIAGARA FALLS, N. Y.

New York, N. Y. Wilmington, Calif. Tacoma, Wash.

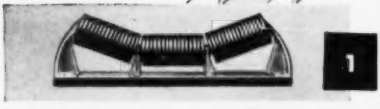
From the salt of the earth

HOOKER CHEMICALS

Caustic Soda Muriatic Acid Sodium Sulfide Paradichlorobenzene Chlorine Sodium Sulfhydrate

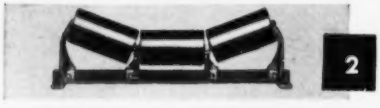


REX ANTIFRICTION IDLERS ADD LIFE TO YOUR BELT CONVEYORS!



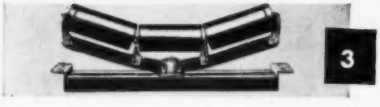
1

REX IMPACT CUSHIONING IDLERS installed under the loading points will take the bumps for your belts . . . minimize ruptures and lacerations. Dual-purpose rubber rolls are scientifically molded with deep primary grooves for maximum cushioning and secondary grooves that provide surface softness to avoid belt laceration.



2

REX TROUGHING IDLERS insure minimum service cost and maximum equipment life. Belt friction wear is practically eliminated, and the closely spaced, well-balanced roll units provide an idler assembly that is kind to the belt. There is a type and style for every application.

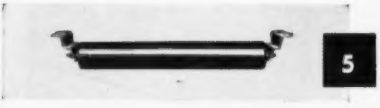


3

REX SELF-ALIGNING TROUGHING IDLERS automatically align belts without the need for side-guide idlers that impose excessive belt edge wear. They eliminate the misalignments caused by off-center loading, side-wind drifting, warped frames or uneven belt stretch. These idlers fit any belt conveyor frame.

4

REX RUBBER-COVERED SPIRAL RETURN IDLERS create an ever-changing point of contact between belt and idler. Ice, abrasive, corrosive and sticky material cannot build up on the idler and cause premature wear and operating difficulties.



5

REX RETURN IDLERS are dead or live shaft type idlers with hydraulic type fittings for high pressure grease lubrication. They are sturdily built, and their smooth-rolling action cuts belt wear to the minimum.

6

REX SELF-ALIGNING RETURN IDLERS assure automatic belt alignment on the return run. They are similar in general design and effectiveness to the Rex Self-Aligning Troughing Idler.

For complete details on these and the many other idlers in the complete Rex line, write for your copy of Bulletin 463-R. Chain Belt Company, 1605 West Bruce Street, Milwaukee 4, Wisconsin.

CHAIN BELT REX COMPANY BELT CONVEYOR IDLERS